Volume Title: Analysis of Inflation: 1965–1974

Volume Author/Editor: Joel Popkin, ed.

Volume Publisher: NBER

Volume ISBN: 0-884-10477-X

Volume URL: http://www.nber.org/books/popk77-1

Publication Date: 1977

Chapter Title: Controls and Inflation: An Overview

Chapter Author: Marvin H. Kosters, J. Dawson Ahalt

Chapter URL: http://www.nber.org/chapters/c0992

Chapter pages in book: (p. 121 - 194)

4

MARVIN H. KOSTERS
American Enterprise Institute
in association with
J. DAWSON AHALT
U.S. Department of Agriculture

Controls and Inflation: An Overview

I. INTRODUCTION

From August 15, 1971, to April 30, 1974, mandatory controls on wages and prices were a component of the economic stabilization policy of the U.S. government. This experiment with "incomes policy" was the first peacetime wage and price control program in the United States. During the period, marked changes occurred in the economic and political environment, in the structure of the program, in the rigor with which controls were administered or were perceived to be administered, and in the rates of price change that emerged. The pace of economic activity ranged from the early stages of a slow cyclical recovery to an extraordinarily vigorous boom in demand, followed by a period of short supply of basic materials, particularly petroleum products, and sharply curtailed production growth. Consumer price inflation initially declined from an

NOTE: The research for this paper was supported by the National Science Foundation (grant GS-43757), the Ford Foundation (grant 740-0510), and the American Enterprise Institute. The full version of the study was presented at the Conference on Price Behavior and was published as *Controls and Inflation: The Economic Stabilization Program in Retrospect* (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1975). The version published here was shortened at the suggestion of the discussant, R. A. Gordon. In particular, a section containing an extensive discussion of the microeconomic effects of controls in specific markets was deleted, but it may be found in the American Enterprise version.

annual rate of slightly below 4 percent in the eight months preceding controls to approximately 3 percent during the first year of controls. But it rose to "double digit" rates of 11.5 percent in the eight months before controls were ended and to 12.2 percent in the eight months after controls were removed.

To assess the influence of controls as an economic policy tool only in terms of what happened to the inflation rate while they were in force would obviously be much too superficial. Price and wage trends occurring under controls are conditioned by the need to allow flexibility for adjustments in response to changes in the market environment, or to adapt the controls so as to contain pressures for significant departures from equilibrium and to keep resources in the channels from which price suppression threatens to divert them. During the period of controls, changes in overall demand levels were of central importance in the market environment, but changes in supply conditions for particular sectors originating from both domestic and foreign sources were also important.

The extent to which controls were intended to affect economic goals other than prices—goals such as output, employment, investment, and efficiency—is relevant in an evaluation of the effects of the controls. Other factors that form part of the context in which controls were administered, and that should be taken into account in evaluating them, are such broader goals as limited bureaucratic intervention in price decisions and collective bargaining, balance-of-payment goals, international trade and foreign policy interests, maintenance of a competitive industrial structure, and preservation of private incentives to promote innovation and efficiency. Finally, a comprehensive assessment of controls should also include a look at economic conditions and prospects prior to the imposition of controls and developments after controls were terminated.

The analysis and discussion in this paper are oriented toward an assessment of controls as a temporary and supplementary "incomes policy" tool. The analysis will look at their possible marginal influence on inflation when they are administered with an emphasis on avoiding serious short-term market disruption and minimizing adverse long-term effects on the economy. Section II is a review of the economic and political developments that preceded the imposition of controls. In section III we look at the design of the control system and changes in the structure of the program. In section IV, the consistency of wage and price behavior with the stabilization regulations is examined by analyzing aggregate data on wage, price, and profit developments. In the fifth section we explore the question of inefficiency and distortions attributable to controls, and in

section VI we address some broad issues concerning the role and limitations of direct controls as a stabilization tool.

II. BACKGROUND

Initially, a policy of gradualism that became known as the "game plan" was put into effect to reverse the rise in the rate of inflation that occurred in the last half of the 1960s.[1] Rapid expansion of aggregate demand from 1964 through 1966, after a period of relatively stable prices, had brought the unemployment rate down to well below 4 percent, a lower rate than had been experienced in the preceding decade. After a pause in 1967, aggregate demand surged again in 1968. By 1969 the unemployment rate was 3.5 percent, with real output growth tapering off and prices rising more rapidly than before.

A gradual slowdown in aggregate demand growth began during 1969. Adjustments in the economy in response to stringent fiscal policy and slower monetary expansion were expected to run in the following sequence:[2] slower growth in total spending in the economy, slower production growth, pressure on profit margins and slower employment growth, smaller wage increases, and finally lower price inflation. The calibration of federal policy instruments necessary to introduce an appropriate degree of disequilibrium and the lags in the process were interrelated and uncertain. It was essential to restrain total spending growth enough to set in motion an adjustment process that would lead to deceleration in price increases, but a longer-than-anticipated lag before prices began to decelerate would result in lower real output levels and higher unemployment than were intended.

By the end of 1970 inflation had proved to be more persistent than had been expected. As a result real output was lower and prices and unemployment were higher than the earlier official projections.[3] These conditions persisted during the first half of 1971. During the first half of 1971 both wholesale prices and the private GNP deflator increased at rates roughly similar to those at which they increased in the previous two years, although consumer prices were increasing less rapidly. The unemployment rate hovered at 6 percent, up from 3.5 percent in 1969. There were no clear indications that unemployment would be reduced appreciably in the ensuing months through more rapid demand growth, and the evidence that inflation was subsiding was tenuous. Further-

more, the rate of price increase, particularly for wholesale prices of industrial commodities, remained high by the standards suggested by the experience of the early 1960s, and the worsening balance of payments was an ominous cloud on the horizon.

The Political Context

There were several indications that the game plan was being played in economic overtime by the beginning of 1971. Unemployment had reached a level that threatened to be politically damaging to the Nixon administration in the absence of firm prospects that it would recede. Public and congressional sentiment became increasingly unfavorable toward the explicitly noninterventionist policies of the administration and shifted toward a preference for direct action to restrain "excessive" wage and price increases.

These conditions provided a climate in which the Democratic Congress enacted legislation in August 1970 authorizing mandatory controls. Whether or not such authority was used, the legislation could be used to embarrass the President and his party.[4] Business attitudes were conditioned by two years in which profits were ground between the millstones of rapidly increasing labor costs and markets in which these costs could not readily be passed through by increasing prices. In October 1970 the Business Council criticized the lack of direct action on wages and prices, a criticism that was reaffirmed in the spring.[5] The Committee for Economic Development, another business group, issued a policy statement in November 1970 recommending establishment of a stabilization body to establish "broad norms" for wage and price behavior.[6] On the labor side, the AFL-CIO had taken a position in support of "equitable" controls if the President determined they were necessary, and George Meany had stated his view that they were.[7] Also, several high officials within the federal government had proposed some form of incomes policy, the most prominent being Arthur Burns, who had become chairman of the Federal Reserve Board in 1970.[8]

Faced with these developments, the administration was increasingly on the defensive in maintaining its noninterventionist stance. In June 1970, the President established the National Commission on Productivity and the Regulations and Purchasing Review Board, and announced that periodic "inflation alerts" would be prepared by the Council of Economic Advisers. In January 1971, the President directed the Cabinet Committee on Economic Policy to

analyze conditions in the steel industry in the wake of announced price increases for some steel products. The Council of Economic Advisers was to report immediately to the committee any "exceptionally inflationary wage or price developments"[9] so that appropriate federal action could be considered. The Construction Industry Collective Bargaining Commission had been established in September 1969, and federal action had been taken to reduce construction spending and encourage training of more skilled construction labor, but there had been no relief during 1970 from increasingly large construction wage increases and the pressures they created for similar wage increases in other sectors. On March 29, 1971, the Construction Industry Stabilization Committee was established to place mandatory controls on construction wages. After a review of the economy by the administration in June, decisions were announced not to apply additional stimulus to demand and not to establish an incomes policy. These statements proved to be the last strong official reaffirmation of the game plan.[10] Larger trade deficits and the increased vulnerability of the dollar to massive conversion into other forms of reserves were added to continuing disappointing news on prices and production, triggering the President's dramatic announcement of the New Economic Policy on August 15, 1971.

Economic Conditions in Mid-1971

By mid-1971 the game plan had been successful in bringing about some elements in the sequence of adjustments envisioned for the process of reducing inflation.[11] Slower monetary expansion combined with fiscal policy restraint had reduced the growth of total spending, slowed production and employment growth, squeezed profits, and stabilized or reduced the rate of price inflation. The game plan had succeeded in achieving the early stages of the disinflation process, but further reduction in inflation depended on a trend toward smaller labor cost increases that had not yet emerged. While wages in some sectors were increasing less rapidly than before, very large increases in other sectors kept average hourly labor costs increasing at a roughly stable rate.

These developments raise two issues concerning stabilization policy performance before and after controls were imposed. One is the extent to which the buildup of significant distortions in the wage structure contributed to a slower unfolding of the disinflation process than had been projected. The other is the extent to which

improved balance in the wage structure and prospects for more rapid productivity growth pointed to the possibility of improved economic performance after 1971 with or without wage and price controls.

Wages and Collective Bargaining[12]

The unemployment rate rose from 3.5 percent in 1969 to about 6.0 percent in late 1970. However, reduced growth of demand in labor and product markets was not accompanied by smaller wage increases. Adjusted average hourly earnings for the private nonfarm sector rose by 6.7 percent in 1970 and 7.0 percent in 1971, indicating that wage rates were increasing more rapidly than they had when unemployment rates were lower. New first-year wage increases under collective bargaining agreements in manufacturing rose from an average of about 8.0 percent in 1969 to nearly 11.0 percent in 1971 even though the unemployment rate in manufacturing increased from 3.3 percent in 1969 to 6.8 percent in 1971.

Continuing large wage increases under new collective bargaining agreements negotiated in 1970 and 1971 had their roots in earlier trends in prices and other wages. Wages for workers covered by long-term wage contracts negotiated in the late 1960s were depressed relative to those of other workers who received wage increases that more quickly reflected the strong labor market demand and accelerating inflation that prevailed in the later period. When long-term contracts expired, there were strong pressures to restore the relative wage positions of the workers they covered through heavily front-loaded new contracts because the deterioration of their position in the wage structure had resulted primarily from an unanticipated increase in inflation.

The influence of long-term contracts on the wage structure during the period of rising inflation is evident in average hourly earnings changes for industry sectors in which most workers were covered by long-term wage contracts. Data on average wage increases in six major industry sectors in which most workers were covered by long-term collective bargaining agreements with common expiration dates show deterioration in the relative wage position of these workers during the term of their contracts (Table 1). These workers received smaller wage increases than were received by the average private nonfarm worker in the two contract periods shown for each industry between 1966 and 1971. When new agreements were negotiated, average wages in the sectors covered increased by more than average wage increases for private nonfarm

workers. In other words, there was a tendency to compensate at the time of negotiation for smaller wage increases during the term of the previous contract.

The data in Table 1 suggest that inflation-induced distortion in the wage structure created conditions leading to unusually large first-year wage increases in major union settlements, particularly in 1970 and 1971.[13] These large negotiated wage increases contributed directly to rapid increases in hourly labor costs and influenced wage changes for related workers, impeding any significant reduction in inflation in spite of considerable slack in labor and product markets.

A major share of the unexpectedly slow decline in wage and price increases in 1970 and early 1971 could have resulted from this

TABLE 1 Increases in Average Hourly Earnings in Selected Industries Mainly Covered by Long-Term Collective Bargaining Agreements and Wage Increases under Collective Bargaining Agreements in Manufacturing, 1966–1971
(annual percent change)

	1966	1967	1968	1969	1970	1971
Private nonfarm	4.5	4.7	6.3	6.7	5.9	6.5
Rubber	3.4	5.6		4.7	5.4	
Autos	2.9	8.6		5.5	13.1	
Trucking	2.9	6.0		6.0	13.8	
Steel		1.1	6.0		3.5	11.9
Metal cans		3.4	10.0		4.2	11.5
Communications		3.2	9.4		3.4	14.7
Collective bargaining agreements (manufacturing only)						
First-year increases			7.0	7.9	8.1	10.9
Deferred wage increases			3.9	4.0	4.6	4.8

NOTE: Changes in average hourly earnings were computed as percent changes in the average from the preceding year, except for the year in which new contracts were negotiated. New contracts were negotiated in the rubber, auto, and trucking industries in 1967 and 1970 and in the steel, metal cans, and communications industries in 1968 and 1971. The percent increase in average hourly earnings in those industries for years in which new contracts were negotiated was computed by comparing average wages for a six-month period after the new contract was negotiated with the average for the same six-month period a year earlier. The particular months chosen are shown in Marvin Kosters et al., "Collective Bargaining and the Wage Structure," *Labor Law Journal*, August 1973, p. 522, Table 3.

much more serious and pervasive pattern of distortion in the wage structure than had been previously experienced during a cyclical slowdown in the economy. Imbalances in the wage structure and the large "catch-up" wage increases in 1970 and 1971 that reduced these imbalances created a transitional lag in wage developments. The pervasiveness of these imbalances also suggests that it would have been extremely difficult to embark on an incomes policy that relied heavily on a simple numerical wage standard, because its credibility could not easily be maintained when pressures for large catch-up wage increases by major unions were so strong.

Productivity and Prices

Extraordinarily slow productivity growth in 1969 and 1970, though a normal cyclical development, was protracted by the depressive effect on real output growth of the sluggish response of wages and prices to demand restraint. Combined with continued large increases in average hourly labor costs, this slow productivity growth produced extremely large increases in labor costs per unit of output. Slack demand in product markets kept businesses from fully recouping the labor cost increases, with the result that profits declined markedly in both 1969 and 1970. Because unit labor cost increases were so large and accounted for such a large share of total costs, the decline in profits could not absorb them, and as a result large price increases continued.

There are several points worth noting here. Pressures for the restoration of balance in the wage structure delayed the arrival of smaller hourly labor cost increases. This delay, and its influence on prices, generated a short-term real output growth path that was lower than had been projected, reinforcing cyclically slow productivity growth and intensifying the pressure of costs on prices. The prevalence of these cost pressures led to a "cost-push" diagnosis of the malady and influenced the design of criteria for price adjustments under the ensuing controls. Slow productivity growth precluded normal increases in real wage and income levels, thereby intensifying pressures for large wage increases, while profits were squeezed to the point where they might be expected to increase significantly in a balanced recovery.

The Outlook in Mid-1971

By mid-1971 conditions had been created for a period of better economic performance. Better performance would require enough strength in aggregate demand to increase the pace of economic activity and enough stability (or some continued decline) in infla-

tion so that stronger demand would raise production and employment levels and would not be dissipated in larger price increases. Prospects were favorable for improved wage and price performance during the cyclical recovery.

On the labor cost side, the period had passed in which pressures for large wage increases under new collective bargaining agreements were most severe. Moreover, deferred wage increases built into existing contracts had stabilized. Deferred increases scheduled to go into effect for 1972 were estimated to be slightly lower than for 1971. While there were some contracts for which large wage increases could be expected—coal miners, railroad workers, and longshoremen—the collective bargaining calendar for 1972 showed fewer workers scheduled to negotiate new agreements and fewer large pattern-setting wage situations than there had been in 1970 and 1971. Moreover, large wage increases were not generally necessary to attract or retain labor in view of the slack in labor markets.

Productivity growth prospects were also favorable during the cyclical recovery in production that was under way. Roughly stable (or even somewhat smaller) hourly labor cost increases combined with more rapid productivity growth could reduce unit labor cost increases, thereby making possible smaller price increases, rising real wages and incomes, and some recovery in profits. Depressed capacity utilization rates suggested ample room for expansion of production without resulting in supply conditions that would create pressure for price increases or generate shortages.[14]

Thus, there was a reasonable prospect for a cyclical rise in productivity growth that would permit real incomes and profits to rise and relieve pressures for large wage and price increases. Realization of this outcome was not assured, however. The trend in newly negotiated wage increases might have been slow to respond to improved balance in the wage structure. Expectations of continued inflation and of possible direct action to restrain inflation might have contributed to persistence in price increases. Expansionary aggregate demand policies might consequently have been disproportionately translated into inflation rather than into real output growth.

III. THE NEW ECONOMIC POLICY

The three elements of the New Economic Policy announced on August 15, 1971, were (1) suspension of dollar convertibility into gold and imposition of an import surcharge to deal with the

balance-of-payments problem, (2) requests to Congress for an investment tax credit and other tax changes to stimulate output and employment, and (3) imposition of a ninety-day freeze on prices, wages, and rents. The New Economic Policy was motivated in large part by high unemployment and was triggered by the international situation—specifically an impending request for conversion of about $2 billion into gold. The element of the New Economic Policy with the most dramatic public impact was the freeze, even though the freeze and the system of controls that followed were intended as a short-term complement to the other policy changes and as a program to speed up the disinflation process already under way.

Structure of the Controls

There were major changes in the organizational structure and administration of controls after the initial freeze, and these changes were widely regarded as marked changes in control policy. The conceptual basis for the regulations applicable to price and wage adjustments remained essentially unchanged, however, for most of the economy during the two and a half years from November 1971 through April 1974, except for the second brief freeze in mid-1973. Both regulations and procedures were modified over time, but the initial wage standard was not formally changed, and the standards for price adjustments generally permitted costs to be passed through with profit margin limitations if prices were increased.

The broad outlines of the standards, procedures, and coverage of the program are summarized in Table 2. The material set forth in the table is amplified in the text by a discussion of some of the salient features of the program's organization and administration.[15] Some of the more detailed technical aspects of the rules and their practical effects are considered in later sections.

Phase II

The Cost of Living Council established the price goals for the stabilization program, exercised authority over procedural issues and issues of coverage, coordinated policies and activities of the other stabilization bodies, and retained planning and policy development responsibility. The goal of reducing inflation to 2 to 3 percent by the end of 1972 was established to permit a gradual reduction in inflation (after an upsurge in the wake of the freeze)

and to establish a context within which the Pay Board and Price Commission could develop and administer their standards. Raw agricultural products were the major sector exempt from controls, and coverage remained basically unchanged during the program, except for the small-firm exemption in May 1972 and the decontrol process in late 1973 and early 1974. A stabilization unit within the Internal Revenue Service was established to provide the field organization for the program and to conduct auditing and enforcement activities.[16]

Phase II began on November 14, 1971. One of its distinguishing features was its heavy reliance on self-administration. The formal coverage of the standards was broader than the reach of administrative intervention through formal review of individual wage and price adjustments. A system of differentiated administrative procedures based primarily on the size of firms and employee units was devised to reconcile broad coverage with limited administrative involvement. Administration of the controls was influenced in several ways by the administration's desire to minimize intrusion by a federal bureaucracy into price and wage decisions.

First, heavy reliance was placed on self-administration of the standards for smaller units; these units were subject only to periodic review or a small probability of possible audit. In this respect, the regulations were administered in a way similar to the way the personal income tax is administered. Second, the standards were designed to be generally applicable in order to permit self-administration, even though they were often difficult to apply to particular cases and inevitably much too simple to cover the full range of complex situations in the economy. Third, the regulations were applied to individual firms or employee units with relatively little consideration for industry price and cost patterns or for wage patterns among industries, crafts, and occupations. These characterizations apply with particular force for Phase II. A more varied and complex approach was evolved beginning in 1973, reflecting changes in market conditions and an increased recognition of the inappropriateness of such a simplified approach over time.

Wages

A general numerical standard for wage increases was established, permitting compensation adjustments of up to 5.5 percent without prior notification or review for all except the largest employee units. Although criteria for exceptions were also provided, the wide applicability of the standard left little scope for adjustments in the

TABLE 2 Regulations of the Control Program, Phases II, III, and IV

Program	Phase II: November 14, 1971, to January 11, 1973	Phase III: January 11, 1973, to June 13, 1973	Phase IV: August 12, 1973, to April 30, 1974
General standards			
Price increase limitations	Percent pass-through of allowable cost increases since last price increase, or Jan. 1, 1971, adjusted for productivity and volume offsets. Term limit pricing option available.	Self-administered standards of Phase II.	In most manufacturing and service industries dollar-for-dollar pass-through of allowable cost increase since last fiscal quarter ending prior to Jan. 11, 1973.
Profit margin limitations	Not to exceed margins of the best 2 of 3 fiscal years before Aug. 15, 1971. Not applicable if prices were not increased above base level, or if firms "purified" themselves.	Not to exceed margins of the best 2 fiscal years completed after Aug. 15, 1968. No limitation if average price increase did not exceed 1.5 percent.	Same years as Phase III, except that a firm that had not charged a price for any item above its base price, or adjusted freeze price, whichever was higher, was not subject to the limitation.
Wage increase limitations	General standard of 5.5 percent. Exceptions made to correct gross inequities, and for workers whose pay had increased less than 7 percent a year for the last 3 years. Workers earning less than $2.75 per hour were exempt. Increases in qualified fringe benefits permitted raising standard to 6.2 percent.	General Phase II standard, self-administered. Some special limitations. More flexibility with respect to specific cases. Workers earning less than $3.50 per hour were exempt after May 1.	Self-administered standards of Phase III. Executive compensation limited.

Prenotification			
Prices	Prenotification required for all firms with annual sales above $100 million, 30 days before implementation, approval required.	After May 2, 1973, prenotification required for all firms with sales above $250 million whose price increase had exceeded a weighted average of 1.5 percent.	Same as Phase II except that prenotified price increases could be implemented in 30 days unless CLC required otherwise.
Wages	For all increases of wages for units of 5,000 or more; for all increases above the standard regardless of the number of workers involved.	None.	None.
Reporting			
Prices	Quarterly for firms with sales over $50 million.	Quarterly for firms with sales over $250 million.	Quarterly for firms with sales over $50 million.
Wages	Pay adjustments below standard for units greater than 1,000 persons.	Pay adjustments for units greater than 5,000 persons.	Same as Phase III.
Special areas	Health, insurance, rent, construction, public utilities.	Health, food, public utilities, construction, petroleum.	Health, food, petroleum, construction, insurance, executive and variable compensation.
Exemptions	Raw agricultural commodities, import prices, export prices, firms with 60 or fewer employees.	Same as Phase II plus rents.	Same as Phase III plus public utilities, lumber, copper scrap, and long-term coal contracts, initially with sector-by-sector decontrol of prices and wages until April 30, 1974.

SOURCE: Cost of Living Council (CLC).

wage structure. The intellectual roots of this approach can be traced to the rationale for the guideposts of the early 1960s. Its public acceptability as a credible approach owed much to widespread public discussion of the potential contribution of a general numerical norm for wage increases.[17] Moreover, it was compatible with an emphasis on self-administration. Under the wage standard, wages and fringe benefits were treated as perfect substitutes. This treatment was consistent with an emphasis on the cost implications of pay adjustments, but it complicated the treatment of situations in which large increases in fringe benefits were at issue.[18]

While procedural differences in the treatment of wage adjustments were formally based on employee-unit size, in practice the review and formal approval of pay adjustments was restricted largely to increases that exceeded the general standard, with self-administration generally applicable to increases within the limits of the standard. Although the pay standard was widely viewed by the public as setting a limit of 5.5 percent (later recognized to be 6.2 percent under provisions dealing with fringe benefits), the actual standard and the way it was administered were more complex. Pay increases of up to 7.0 percent were permitted for deferred wage increases and as exceptions for tandem relationships, for catch-ups to offset relatively small previous wage increases, and for retaining essential employees. Increases exceeding those explicitly permitted by the regulations could be and were often permitted after review of a particular case.[19]

The regulations covering wage increases were initially developed and administered by a tripartite Pay Board.[20] After four of the five original labor representatives withdrew their participation on March 22, 1972, the Pay Board was reconstituted as a public body with seven members. While a measure of underlying labor cooperation and acquiescence was retained throughout Phase II, organized labor's formal participation in the program was not renewed until the advent of Phase III. Labor participation at a policy level instead of an operating level was obtained through establishment of the Labor-Management Advisory Committee, and a significant impetus for restructuring the program in Phase III came from a recognition that a participatory and cooperative role for labor was essential for any program of wage and price restraint.

Prices

The pricing standards for Phase II were developed and administered by the Price Commission.[21] Price adjustments were per-

mitted if there had been cost increases, subject to the provision that these price increases did not lead to profit margins that exceeded limits established by a base period. Both the cost pass-through and profit margin rules were applied on a firm-by-firm basis, an approach that made self-administration feasible. All firms except the largest could apply the regulations themselves in making price adjustments. The largest firms had to submit requests for price increases and secure approval before those increases could be put into effect. For retail and wholesale operations the cost pass-through regulations permitted maintenance of percentage markups on the cost of merchandise only, while in the manufacturing and services sectors increases in all allowable costs incurred could be passed through on a percentage basis. Price increases to reflect increased merchandise costs for retailers and wholesalers were self-administered even in the largest firms, as were price adjustments for producers of products for which major input costs were exceptionally volatile, for example, in meat-packing operations. More specialized rules, also based on cost pass-through concepts, were developed for health services, insurance, and rents.

The Shift to Phase III

The restructuring of the stabilization program for Phase III was designed to provide a way station out of controls and to secure renewed cooperation in a program of wage and price restraint. From the time they were initially imposed, wage and price controls had been viewed by the administration as a short-term approach. It was repeatedly announced that the goal was to terminate controls as soon as this was feasible.[22] Phase III was intended to be a transitional stage in the process of removing mandatory wage and price controls. At the same time it was intended to contribute toward continued restraint. One element in this restraint involved enlisting the cooperation of organized labor during a year in which the bargaining calendar was heavy and a resurgence of large wage increases was regarded as likely by many observers.[23] The other major element involved special attention to sectors in which continuing inflation problems were regarded as most severe, not only through the application of specialized controls mechanisms but also by an emphasis on federal policies influencing supply, particularly in the agricultural sector. How much Phase III contributed to restraint is a complex problem, but it clearly failed as an attempt to remove controls. Its demise came with the imposition of a new

price freeze after five months of retreat from flexibility and self-administration.

The major organizational changes in Phase III were the termination of the Pay Board and Price Commission and the assumption of operational responsibility by the Cost of Living Council.[24] New committee structures were formed for the food and health sectors (an advisory committee with private sector representatives and a government committee to review federal policies influencing inflation for each sector) while the Construction Industry Stabilization Committee continued to operate. Standards and procedures in these three sectors continued basically unchanged from what they were in Phase II.

For other sectors of the economy, the major substantive changes in the program were a modification of the price standard and a change in the administration of price and wage standards. The price standard was modified so as to reduce the constraining influence of profit margin limitations; the profit margin limitation was removed for firms with cost-justified price increases averaging less than 1.5 percent, and the base period that could be used in computing the profit margin limits was extended forward to the most recently completed fiscal year. Prenotification requirements for wages and prices were terminated, although quarterly reports were required for the largest units. Moreover, broad conformance with the standards was required instead of detailed technical compliance with regulations, since detailed technical compliance would need to be accompanied by increasing complexity and detail in the regulations and carefully spelled-out rulings for particular situations. These changes toward "voluntary" and "self-administered" standards were perhaps of most substantive importance and generated most public interest.

On the wage side, John Dunlop, the new director, gave as one of his guiding principles the February 26, 1973, statement by the Labor-Management Advisory Committee that "no single standard or wage settlement can be equally applicable at one time to all parties in an economy so large, decentralized, and dynamic."[25] Although the change in emphasis was widely viewed as a repudiation of the wage norm for Phase II, the main practical effect of the change was to give more explicit attention to wage-structure relationships and patterns but not to raise the average level of wage settlements.[26] On the price side, one of the most revealing indications of the direction in which the program was oriented was the clause in the general price standard permitting adjustments that would otherwise exceed the standards "as necessary for efficient

allocation of resources or to maintain adequate levels of supply." Apart from the unwinding of delays that had previously been introduced by prenotification requirements, there was little formal change in the substance of the regulations, however, because the regulations, computation procedures, and rulings developed in Phase II were to be used in self-administering adjustments in both prices and wages.

The development and introduction of Phase III had been premised on a view of the price outlook that was far more optimistic than the inflation trend that actually emerged—a failure in prediction that was shared by most professional forecasters.[27] It was also based on the view that the combination of substantive economic conditions in the labor market (particularly the restoration of improved balance in the wage structure) and the cooperative involvement of organized labor in a program to maintain stability made wage restraint during the year a realistic and achievable objective. Wage increases during 1973 were reasonably consistent with prospects as they were viewed in late 1972, in spite of price increases much larger than had been projected.[28]

The surge in food prices, led by large increases in meat prices, began in December 1972. By the end of March, ceilings were imposed on meat prices, based on the expectation at that time that food prices would rise less rapidly later in the year and the view that temporary meat price ceilings could therefore help to maintain restraint in wage settlements. At the beginning of May, the acceleration of price increases had become much broader, and limited prenotification was reinstituted to introduce some delay in the pass-through of increased costs of a wide range of basic materials. By June the earlier optimism regarding food prices later in the year was no longer tenable, and accelerating price increases had become more pervasive throughout the economy. The widespread perception that Phase III was a failure and that a return to a controls structure similar to Phase II could contribute to renewed stability undoubtedly influenced public and congressional attitudes. The decision to terminate Phase III was the policy response.

The sharp acceleration of price increases in 1973 coincided closely in timing with the shift to Phase III but owed little to modifications in the standards of Phase II and their administration. Perhaps the strongest evidence that the shift to Phase III was not responsible for the acceleration is that the acceleration began in food prices, and food prices remained the major contributor to higher living costs throughout most of the year, even though mandatory controls on food prices, including prenotification re-

quirements, were retained throughout Phase III. Moreover, price increases in most other sectors were supported by increased costs (according to the quarterly reports covering the period), most of the largest price increases were within the limits permissible during Phase II, and profits and cost data from other sources show no sharp break with earlier trends. Taken together, this evidence indicates that the problem was not a failure of compliance with the cost pass-through regulations that had been in force since the program began. Consequently, the principal action tool of Phase III, the "stick in the closet" to induce compliance, turned out to be highly inappropriate as an instrument for tempering the kind of inflation that emerged.

Freeze II and Phase IV

The public dialogue on inflation during the first half of 1973 was dominated by discussion of controls and their apparent lack of stringency. In this climate public and congressional pressures rose for strong direct action. A price freeze announced June 13, 1973, was a response to these pressures, despite economic judgments that its disruptive consequences would outweigh its contribution to price stability. The duration of the freeze was not to exceed sixty days; it covered only prices, with wages to be adjusted under existing standards and procedures; and it was to be followed by a stringent program of controls. It was lifted on a sectoral basis as sectors were placed under regulations similar to but somewhat more stringent than those of Phase II, beginning July 18 with the food sector, where market disruptions were most severe.[29] The introduction of Phase IV was also accompanied by announced intentions to decontrol on a sector-by-sector basis.

The standards of Phase IV generally permitted pass-through of increased costs, although there was more differentiation among sectors in the application of this principle. Costs could only be passed through on a dollar-for-dollar basis, however, which had not been the case in Phase II, and prices in a number of sectors were significantly limited because further increases in prices were restricted to increases in costs occurring since the last quarter of 1972 that had not been reflected by price increases during that period. Situations in which price ceilings held prices below market levels were far more numerous in Phase IV than in earlier phases. However, this was mostly attributable to changes in both domestic and world market conditions, to more use of delays in sectors such as

steel, and to specialized sectoral regulations, particularly in the petroleum, health, and food sectors.

The difference in market conditions between 1972 and 1973 and the extent to which the actual trend of consumer prices during the year would depend on decisions and developments wholly unrelated to controls is illustrated by two areas singled out by the President in his announcement of the freeze—gasoline and food prices. In the announcement, he referred to strong export demand for farm products, and requested more flexible authority from Congress for export controls. Comprehensive export controls for farm products were not imposed because it was recognized that their imposition would seriously compromise other goals. However, stabilization of food prices at retail was inconsistent with a dramatically rising cost structure that reflected the rise of raw farm product prices on world markets. While the full implications of rising crude oil prices were not evident at this time, prices on world markets were rising above domestic levels well before the embargo, and the U.S. economy was dependent on supplies from foreign sources. Controls could and did play a role in keeping petroleum product prices below levels they would otherwise have reached, but there was no escape from the significant price consequences of the tripling of imported crude oil prices late in the year.

Although the Phase IV regulations were substantively similar for most sectors to those that had been in force in Phase II, the general policy approach of the former differed in two fundamental ways. There was less reluctance to tolerate temporary dislocations resulting from the controls, such as dispersion in domestic prices and instances of domestic prices below prices on international markets. These conditions had been mainly confined to the lumber industry during Phase II. Though they were more prevalent and more severe during Phase IV, remedial adjustments were usually not made unless it could be demonstrated that these conditions would have seriously harmful and costly effects. At the same time, initiatives for the selective decontrol of individual sectors were carried forward, gradually at first and at a faster pace in early 1974. Criteria for decontrol and its timing were never publicly set forth in detail, but they frequently involved commitments from industry representatives with respect to prices, investment, or improvement of industrial relations practices.[30] This approach helped to avoid a disorderly retreat from controls through administrative breakdown or overwhelming pressures from litigation or from congressional initiatives. At the same time the continuing pinch of controls kept counterpressures against decontrol from building.

The elements of the decontrol process are not easily summarized, but it was oriented toward an orderly and cumulative extrication from controls. One of its guiding principles was a general policy of decontrolling both wages and prices in each case. The somewhat paradoxical role played by price prospects is illustrated on the one hand by decontrol of lumber when Phase IV began because prices were declining, and on the other by early decontrol of fertilizer in spite of large price increases because decontrol would contribute to increased domestic supply. The administration's position on extension of the stabilization authority was also designed to facilitate continued decontrol while retaining enough flexibility to promote effective dialogue among private-sector interests, Congress, and the executive branch. By April 30, 1974, more than half of the portion of the economy covered when Phase IV began had been decontrolled, with only 12 percent of the consumer price index remaining under control as against 44 percent before decontrol began. Congressional attitudes had changed so markedly from the previous year that no action was taken to provide for the limited mandatory authority requested by the administration, or even to establish a basis for monitoring the private sector and for analysis and policy review within the executive branch explicitly directed toward longer-term inflation concerns.[31]

IV. CONTROLS AND THE ECONOMY

The effects of controls on the economy, and the effects of developments in the economy on controls, can be approached from various points of view. Each approach can give insight into some aspect of the relation between stabilization actions and economic goals, but regardless of the approach the insights cannot be easily summed up to provide an overall assessment. Careful analyses using different approaches have supported different conclusions on the influence of controls on wages, prices, and profits during the program.[32] In this section, the stabilization program is examined primarily from the point of view of overall consistency of performance with the stabilization rules.

General Performance of the Economy

During the period from 1971 through 1974, wage and price controls were only one component of economic policy, and improved price

stability was only one of several goals of that policy. Controls and their administration were regarded as closely linked with the high-priority goal of a vigorous cyclical recovery in 1972. Their influence on this goal was initially uncertain and given close attention.[33]

That controls did not interfere with a resumption of strong cyclical growth and may have contributed to it is an assertion that needs little qualification. Real output rose by about 6 percent in both 1972 and 1973 compared to 3.3 percent in 1971, the first year of the recovery. Although the unemployment rate declined only gradually throughout 1972 and 1973, increases in employment and in the labor force were unusually large. Employment rose by more than 2.5 million workers in 1972 and 1973 compared to an annual average rise of 1.3 million between 1959 and 1969. The period of rapid increase in output that extended through the first quarter of 1973 was accompanied by strong cyclical productivity growth, a short-term development that contributed heavily to the favorable price, income, and profits trends of 1972.

Pressures of labor costs on prices were relieved by the surge in productivity growth, permitting unusually large increases in real earnings with a somewhat less rapid rise in wage rates than earlier. The large increases in output were accompanied by rising profits and some rise in the profits share, although the employee compensation share remained unusually high during the cyclical expansion. These conditions during 1972 help to account for the degree of public acceptance of controls at that time and for the underlying cooperation of organized labor evidenced by the low incidence of work stoppages.

In 1973 price increases accelerated sharply, at the outset mostly for food, and the acceleration in inflation at the consumer level was heavily concentrated in food throughout most of the year. A continuation of relatively moderate wage increases led to a decline in real earnings, even though labor costs per unit of output rose more rapidly when productivity increases tapered off during 1973. Most of the acceleration in price increases, however, can be traced to factors other than larger increases in unit labor costs.

The price surge of 1973 was dominated by developments that were largely outside of the aggregative domestic cost and price relationships that have received most attention in formulating projections of price performance. The main exogenous elements were the decline in world food supply, the further devaluation and subsequent slide in the value of the dollar, the strength and coincidence of the boom in most large industrial countries, and by fall, the oil embargo and action taken by the international cartel to raise prices.

In addition, a number of basic materials industries were operating at capacity production levels, though this was belatedly recognized. While the inflation was supported by a period of rapid monetary expansion, these developments through their influence on domestic supply and prices had a major impact on short-term inflation. It is possible, however, that delays in price increases induced by the controls contributed to the persistence of overly expansionary policies by delaying the recognition of inflationary pressures in 1972 and early 1973.

Wages

Wage increases, as measured by adjusted average hourly earnings, were somewhat smaller in percent terms in 1972 and 1973 than in the preceding four years. The decline in new first-year wage increases under major collective bargaining agreements was much more pronounced. In manufacturing, for example, the average increase declined from 10.9 percent in 1971 to 6.6 percent in 1972. The decline in construction wage increases began in 1971, coincident with the introduction of controls, and new first-year increases declined from an average of 17.6 percent in 1970 to 5.0 percent in 1973. While this shows that wages increased less rapidly under controls than before, the extent to which the slowdown was attributable to the controls is not clear.

Wage-structure developments in the period immediately before institution of controls had created conditions favorable for achieving smaller wage increases by 1972. Deferred wage increases scheduled for 1972 were somewhat lower on average than those for 1971, and most workers with contracts expiring in 1972 had received relatively large increases during the term of their contracts. Their position in the wage structure compared to relative positions of other unionized workers had not deteriorated significantly. Moreover, workers in nonunion manufacturing establishments received smaller wage increases in 1970 and 1971 than those in union establishments. Thus, the wages of most workers with wage agreements scheduled to expire in 1972 were in better balance with wages of other workers in the economy than had been the wages of those covered by contracts expiring in 1970 or 1971. Moreover, the shift from acceleration to a slight deceleration in consumer price increases meant that an improved balance between wage and price increases had emerged after the catch-up process that occurred in the late 1960s.

Wage-structure conditions in 1972 also pointed to the prospect of moderate settlements in 1973. The collective bargaining calendar was dominated by a few large contract situations, and the available evidence indicated that wages under most of the largest contracts expiring in 1973 had increased during the term of these contracts at least as rapidly as had the wages of the average worker. This pattern is illustrated in the tabulation below, which shows the percent increase in average hourly earnings in three industries in which a high proportion of workers were covered by long-term contracts expiring in 1973 (the figures are from the Bureau of Labor Statistics):

Industry Sector	1971	1972
Private nonfarm	6.5	6.4
Rubber	6.5	7.6
Autos	12.3	8.1
Trucking	13.3	10.8

The lack of evidence of deterioration in the relative wage positions of workers under contracts expiring in 1973 is in striking contrast to the pattern in the late 1960s (see Table 1). Moreover, the slower price increases of 1972 permitted unusually large real wage gains for most workers, including those with contracts expiring in 1973.

The wage situation in construction and some other sectors was more complex. First-year wage increases in construction, after accelerating throughout the late 1960s, reached an average rate of increase of over 17 percent in 1970, and normal wage patterns within the industry were severely disrupted. The extremely large wage increases in construction were considered by many observers to be creating wage-structure pressures in other sectors, as workers with comparable skills sought comparable wage increases. The disorderly wage-structure conditions that emerged, both within the construction sector and for wages of workers in other sectors with skills similar to those of construction workers, do not lend themselves to a simple interpretation. They represented developments more complex than simple restoration of a balance in relative wages that had been disrupted primarily through inflation. Consequently, there is no strong basis for confidence that the pattern of leapfrogging and catch-up would have been broken in the absence of controls. The timing and magnitude of the decline in new wage increases in construction in 1971 and 1972 provide strong circumstantial evidence that a significant influence should be attributed to the controls in that sector.[34] Moreover, smaller wage increases in

construction under wage controls may have contributed indirectly to wage stabilization in other sectors. Since construction wage levels were already relatively high, it would have been extremely difficult to achieve smaller wage increases in other sectors and a restoration of more normal wage-structure patterns in the absence of a sharp reduction in construction wage increases.

For most sectors, the fact that new wage increases under collective bargaining agreements in 1972 and 1973 were smaller than those in 1970 and 1971 fits the pattern expected on the basis of wage structural developments. Much of the decline in wage increases could have been the result of factors other than the controls, although controls may have facilitated a more rapid realization of smaller wage increases. Wage-structure developments undoubtedly contributed to the acquiescence of organized labor in settlements with smaller wage increases in 1972 and 1973 than had been obtained earlier. The fact that the Pay Board approved higher wage increases in the union than in the nonunion sector, the concentration of wage cutbacks in the union sector, a declining differential between wage increases for union and nonunion workers in manufacturing in 1972, and the reduced dispersion in the size of new wage settlements in 1972 and 1973 are all consistent with the view that an important role should be attributed to changing wage-structure conditions.

Assessment of the contribution of controls to the reduction in the size of new wage increases under collective bargaining agreements in 1972 and 1973 is complicated by the influence of wage structural changes. In Table 3, data on the distribution of wage increases under major agreements show a pronounced reduction in the proportion of increases that exceeded 8 and 10 percent in 1972 and 1973. Although changes in wage-structure conditions provided grounds for expecting fewer very large wage increases after 1971, wage controls may have helped to ensure that restoration of wage-structure balance was accompanied by a reduction in average wage increases.

It has often been suggested that setting a standard or guideline as a ceiling for wage increases also tends to set a floor.[35] The evidence from the data in Table 3 is mixed. A larger proportion of settlements with wage increases below 5 and 6 percent occurred during the two years of controls than during the preceding two years. However, by 1973, wage increases were also far more heavily concentrated in the 5 to 6 percent range than they had been previously. Since the wage standard was implemented for a period too short to assure that its full consequences had become evident, and

TABLE 3 First-Year Wage Rate Changes in Collective Bargaining Agreements Covering 1,000 Workers or More

Type of Wage Rate Action	Percent of Workers Affected							
	All Industries				Manufacturing			
	1970	1971	1972	1973	1970	1971	1972	1973
No wage increase	–	1	3	1	–	1	2	–
Increase in wages	100	99	98	99	100	99	98	100
Less than 4 percent	1	1	8	8	1	2	4	4
4 to 5 percent	1	1	6	17	1	2	7	5
5 to 6 percent	3	3	20	30	6	4	23	47
6 to 7 percent	17	9	21	22	33	16	26	24
7 to 8 percent	11	5	14	9	18	7	20	7
8 to 10 percent	13	17	15	10	16	15	14	12
More than 10 percent	54	61	13	3	24	53	5	–
Not specified	1	1	–	–	–	–	–	–
Total wage actions	100	100	100	100	100	100	100	100
No. of workers (thous.)	4,675	3,978	2,424	5,320	2,184	1,913	913	2,318
Mean adjustment (percent)	11.9	11.6	7.3	5.8	8.1	10.9	6.6	5.9
Median adjustment (percent)	10.0	12.5	6.6	5.5	7.5	10.1	6.2	5.5

SOURCE: U.S. Bureau of Labor Statistics.

since little confidence can be placed in projections of the proportion of small wage increases that was most likely in the absence of controls, these data provide at best only weak evidence on this issue.

Another issue that has undergone considerable debate is the effectiveness of a simple numerical guideline or standard for wage stabilization. The standards and computational procedures established during Phase II were neither strongly reaffirmed nor explicitly disavowed in 1973; they were, however, used along with other criteria under an approach in which the idea of a single standard applicable to all wage situations was explicitly rejected. These data indicate, however, that the dispersion in actual wage settlements was smaller in 1973 and average increases were smaller, both for all industries and within manufacturing, than in 1972. The standards were apparently administered more flexibly in 1972 than was generally recognized, and they resulted in lower average increases in 1973 than in 1972, in spite of the announced intentions to administer them with more flexibility.

Prices

The goal of a 2 to 3 percent rate of inflation by the end of 1972 was established when controls were introduced. The desired reduction was considerably below the 6 percent increase in consumer prices that took place during 1969. However, the upper range of the goal was a modest target compared to the 3.6 percent rate of increase during the first eight months of 1971. The belief that the goal was within reach was bolstered by the fact that consumer prices were increasing at about a 3 percent rate in mid-1972. More rapid increases in food prices in late 1972, reflected most strongly in the wholesale price index, pointed toward a temporary acceleration in consumer price inflation. But since the acceleration was mainly limited to the farm and food sector, the acceleration in inflation from this source could potentially be reversed relatively quickly by appropriately expansionary farm policies if crop conditions were favorable.

This prospect was shattered by the size and persistence of the increases in farm and food prices, along with the unexpected emergence of tight markets and sharp price increases in several other critical sectors. Thus, the initial promise of progress toward renewed price stability, nurtured in part by the initial apparent success of Phase II, was followed by a surge in inflation to almost un-

precedented rates in spite of efforts to restructure the controls to contain it.

Evaluation of the influence of controls on prices is facilitated by examining the sectoral incidence of inflation and of its acceleration during the period. The pass-through of increased costs formed the basis for price adjustments, and in several sectors prices of inputs that accounted for a major share of total costs were exempt from controls. As a result, in those sectors control was exerted only on processing and distribution markups, and prices could rise dramatically under the stabilization rules in contrast to other sectors in which most of the major inputs were domestically produced and subject to controls. Moreover, increases in prices of major inputs and pass-through of those increased input costs to higher product prices were generally permitted when demand conditions in the marketplace supported them. This approach was necessary in view of the limited supplementary role intended for controls and the reluctance to take complementary measures such as subsidization, rationing, or export controls that would have been necessary if a more ambitious role had been assigned to controls.

During 1972, disproportionate contributions to inflation came from the food component of the consumer price index and the farm products and processed food and feeds component of the wholesale price index (Table 4). Increases in wholesale industrial prices were disproportionately concentrated in lumber and hides. In all of these sectors, major inputs were exempt from controls. Demand pressures were transmitted throughout the processing and distribution chain, a process that kept cost increases, except for costs of producing exempt products, roughly consistent with product price increases. In the first three quarters of 1973, food prices rose rapidly, and rapid increases in exempt farm product prices accounted for much of their acceleration. In the last part of the year, the contribution of petroleum and energy prices to inflation was extraordinarily large, even though petroleum and other energy products represented only small components of the indexes.[36] In both sectors, increased costs were quickly reflected in higher consumer prices because the time spent in the production and distribution chain is relatively short. While the prices of both farm products and petroleum products were strongly influenced by developments in international markets, pressure on domestic prices came from export demand in the case of farm products and from rising import prices in the case of petroleum products.

The strength of demand in both domestic and foreign markets and the devaluation of the dollar combined to support higher prices

TABLE 4 Consumer and Wholesale Prices by Phases of the Stabilization Program (percent changes for selected components; seasonally adjusted compound annual rates)

Price Indexes and Components	1969: 12 Months (12/68–12/69)[a]	1970: 12 Months (12/69–12/70)[a]	1971: 8 Months Prior to Freeze (12/70–8/71)	Phase I: 3 Months (8/71–11/71)	Phase II: 14 Months (11/71–1/73)	Phase III: 5 Months (1/73–6/73)	Freeze II: 2 Months (6/73–8/73)	Phase IV: 8 Months (8/73–4/74)	Post-controls: 8 Months (4/74–12/74)
Consumer Price Index									
All items	6.1	5.5	3.6	2.0	3.7	8.3	3.8[b]	11.5[b]	12.2
Food	7.2	2.2	4.7	1.3	6.7	20.8	0.9[b]	17.9[b]	11.7
Meat, poultry, and fish	11.2	−0.6	2.2	6.6	13.0	39.6	−13.5[b]	5.9[b]	3.6
Nonfood commodities	4.5	4.8	2.6	1.0	2.5	4.6	3.0	11.1	12.6
Energy products[c]	3.1	3.6	0.7	−0.7	2.4	18.3	2.5	62.1	3.9
Services[a]	7.4	8.2	4.5	3.1	3.5	4.3	5.3	9.5	12.5
All items except food	5.7	6.5	3.4	2.3	2.8	5.0	3.7	10.4	12.2

Wholesale Price Index

All commodities	4.8	2.2	4.5	2.0	6.8	21.7	−13.7[b]	19.7[b]	19.8
Farm products and processed foods and feeds	7.5	−1.4	5.5	6.5	14.9	50.2	−34.0[b]	13.6[b]	13.8
Farm products	8.4	−4.7	7.0	6.9	20.7	75.5	−35.0[b]	12.4[b]	−1.4
Processed foods and feeds	6.8	0.8	4.6	5.0	11.4	38.2	−34.9[b]	14.8[b]	25.9
Industrial commodities	3.9	3.6	3.9	1.1	3.6	10.8	4.8	24.0	22.5
Hides	3.7	0.5	4.6	3.2	21.0	−6.0	11.6	1.2	0.2
Fuels	4.0	11.1	−0.1	2.5	5.9	19.1	10.4	76.3	51.9
Lumber	−8.3	−4.4	29.6	2.4	12.0	46.4	−9.6	14.0	−17.7
Metals	9.8	2.7	6.1	1.0	3.3	10.8	9.5	31.4	25.2
Selected stage-of-processing indexes									
Crude materials except food	10.6	4.7	2.1	2.6	10.8	23.9	18.2	69.1	1.1
Intermediate materials except food	3.8	3.2	5.8	1.0	4.0	12.9	4.8	25.8	25.4
Consumer goods except food	2.9	3.9	1.9	1.1	2.4	7.0	3.6	18.6	17.8

SOURCE: U.S. Bureau of Labor Statistics.

[a]Not seasonally adjusted.

[b]Price changes measured using July 1973 instead of August 1973 to reflect the early release from the sixty-day freeze of food prices on July 18, 1973.

[c]Calculated as a weighted average of the indexes for gasoline, motor oil, fuel oil, and coal, using December 1972 weights.

for a widening range of basic materials. These higher prices were initially reflected primarily in the wholesale price index. In 1973, prices of basic and partially processed materials, which constituted 30 percent of the industrial component of wholesale prices, accounted for about 75 percent of the overall increase in industrial prices. These increased costs for processors and distributors were reflected in the latter part of 1973 and in 1974 by price increases for other commodities in the wholesale price index and higher consumer prices.

There was considerable scope for price increases within the limits of the stabilization rules at the beginning of 1973. The extent to which the prices of commodities in the industrial component of the wholesale price index could rise during 1972 and early 1973 before reaching levels authorized from the outset of the freeze in August 1971 is shown in Table 5. Much of the room for price increases was concentrated in the three sectors shown separately, and the amount of room left was rapidly shrinking in the first part of 1973. The tabulation does not take into account, however, the additional authority for price increases granted by the Price Commission during Phase II. Many companies in each of these sectors, and most of the major companies in the chemical industry, were authorized under term-limit pricing agreements to raise prices by an average of 1.8 to 2.0 percent above the stated levels.[37] By November 1972, after submission of prenotification requests, price increases averaging between 3 and 4 percent had been approved covering a large proportion of the sales of large firms in each of these sectors. Much of the acceleration in wholesale price increases in early 1973 represented increases toward previously authorized levels.

To assess the extent to which price increases during the program were consistent with the cost pass-through rules, actual cost and price trends can be compared. Because labor costs constitute a major share of value added, it is instructive to compare increases in unit labor costs and in the implicit price deflator for the private nonfarm and nonfinancial corporate sectors during the period of controls. There was an unusually close correspondence between price and unit labor cost increases during 1972; price increases were smaller than unit labor cost increases in 1973.[38] The close correspondence during 1972 and early 1973 is particularly striking because in the typical cyclical pattern, at least prior to 1968, price increases exceeded unit labor cost increases when demand and output increases were large. To adjust for this cyclical influence, predicted differences for the period beginning with the last quarter of 1971 were developed on the basis of a regression fitted to the pre-

TABLE 5 Wholesale Prices of Industrial Products below Initial Price Ceilings: Number of Items and Impact, Selected Months, December 1971–April 1973

Industrial Commodities below Apparent Price Ceilings	Dec. 1971	June 1972	Dec. 1972	April 1973
Wholesale industrial commodities (73.162)[a]				
Number of commodities below ceilings	553	496	473	366
Impact of rise to ceilings	1.82%	1.54%	1.46%	0.90%
Chemicals and allied products (5.716)[a]				
Number	69	78	78	69
Impact	0.22%	0.21%	0.21%	0.17%
Metals and metal products (13.439)[a]				
Number	127	113	109	68
Impact	0.74%	0.65%	0.62%	0.25%
Machinery and equipment (12.280)[a]				
Number	138	142	141	120
Impact	0.32%	0.34%	0.34%	0.26%
All other components (41.627)[a]				
Number	219	163	145	109
Impact	0.54%	0.34%	0.29%	0.22%

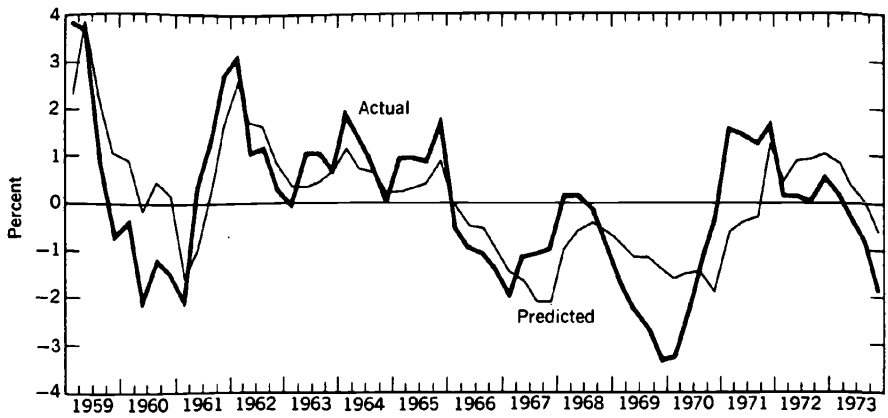
SOURCE: U.S. Bureau of Labor Statistics.

NOTE: Apparent initial price ceilings are defined as the highest prices of four months: May 1970, June 1970, July 1971, and August 1971. Prices in these months were chosen to approximate the alternate price ceilings of May 25, 1970, in the legislation and those of the base period for the freeze in the thirty days prior to August 15, 1971. Measures of the impact of a rise in prices to apparent initial ceiling levels are estimates of the percent impact of the wholesale price index on the industrial commodities component.

[a]Numbers in parentheses reflect relative importance in December 1971.

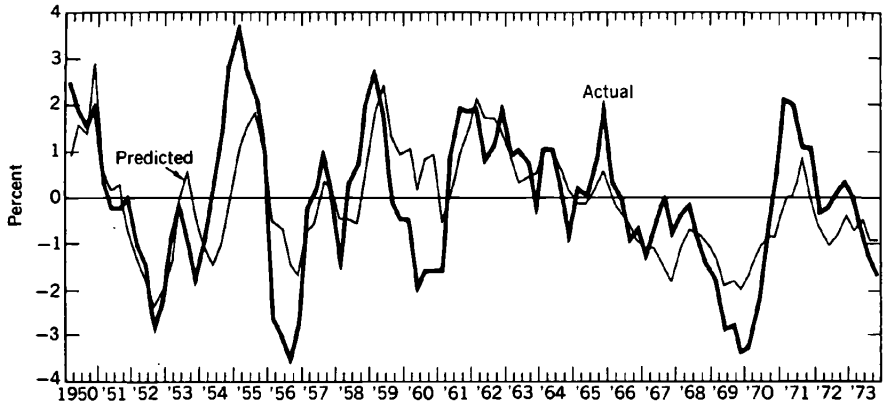
ceding period and including the unemployment rate and changes in real output.[39] The predicted differences are compared with actual differences in figures 1 and 2, and the charts show substantially smaller price increases relative to unit labor cost increases than predicted throughout the period of controls. Those data strongly suggest that price increases conformed more closely to unit labor cost increases under the cost pass-through rules of the controls than would have been expected at that stage of the cycle in the absence of the pass-through rules.

FIGURE 1 Predicted and Actual Changes in Prices and Unit Labor Costs of Nonfinancial Corporations, 1959–1973 (difference between percent change in prices and unit labor costs[a])



SOURCE: Bureau of Labor Statistics.
[a] Quarterly percent change in prices minus percent change in unit labor costs measured from four quarters earlier.

FIGURE 2 Predicted and Actual Changes in Prices and Unit Labor Costs in the Private Nonfarm Sector, 1950–1973 (difference between percent change in prices and unit labor costs[a])



SOURCE: Bureau of Labor Statistics.
[a] Quarterly percent change in prices minus percent change in unit labor costs measured from four quarters earlier.

Profits

Corporate profits rose by an average of 15 percent per year from 1970 to 1973, after declining by an average of 12 percent per year from 1968 to 1970. The pretax corporate profits share rose from 11.8 percent in 1970 to 13.4 percent in 1972 and 13.6 percent in 1973, but remained well below its average level of 17.4 percent during the 1960s. Profits are highly cyclical, and it is difficult to compare their actual performance in 1971–1973 with performance that would normally be expected in a cyclical recovery. It is instructive, however, to analyze the extent to which profit trends during this period were consistent with the stabilization rules and to examine the relationship between price and profit margin changes.

In the simplest analytic framework, the cost pass-through rules for price adjustments suggest that percent profit margins on sales should remain constant with percent cost pass-through and decline with dollar-for-dollar pass-through of costs. This analytic framework, however, does not take into account possibilities for input substitution, short-term productivity changes that differ from those applied during the program, changes in product mix, and the effect of increased volume on fixed costs per unit of output. Thus, actual profit margins could rise within the framework of the stabilization regulations.

The consistency of profit performance with the stabilization regulations is explored in tables 6, 7, and 8, along with the influence of alternative pricing rules and short-term productivity changes on profits and prices. The analysis is focused mainly on profits, value added, and implicit price deflators for nonfinancial corporations because the coverage and procedural requirements of the controls were concentrated on large firms and the data are readily available. These data permit some judgments to be made about the behavior of costs, prices, and profits in relation to the regulations. The period over which the analysis is made begins with the first quarter of 1971 because price increases under the stabilization regulations could not be linked to cost increases that occurred earlier than the beginning of 1971.

The predominant share of the increase in profits during the entire period from the first quarter of 1971 to the second quarter of 1974 can be attributed to the increase in the current dollar value of output during that period rather than to a rise in percent profit margins. Of the $5.4 billion cumulative increase in profits for nonfinancial corporations during the second quarter of 1974 (column 1, Table 6), $5.2 billion was required to maintain a constant percent profit mar-

TABLE 6 Profits and Profit Margins of Nonfinancial Corporations, Quarterly and Cumulative Changes from 1971I through 1974II

		Calculated Change in Profits		
	Actual Change in Profits (1)	Maintenance of Constant Percent Margin (2)	Departure from Constant Percent Margin (3)	Diff. between Constant Percent and Constant Dollar Margin[a] (4)
Year and Quarter	Quarterly Change in Profits (billions of dollars, annual rates)			
1971II	2.6	1.1	1.5	0.5
III	1.2	0.8	0.4	0.3
IV	0.5	1.2	−0.7	0.1
1972I	5.1	2.3	2.8	0.6
II	2.3	1.8	0.5	0.2
III	2.3	1.2	1.1	0.2
IV	5.7	2.4	3.3	0.5
1973I	2.9	2.8	0.1	0.6
II	0.4	1.8	−1.4	0.9
III	−0.5	1.3	−1.8	0.9
IV	−0.2	1.7	−1.9	1.4
1974I	−4.1	0.5	−4.6	2.1
II	3.2	1.9	1.3	2.2
Cumulative Periods	Cumulative Change in Profits[b] (billions of dollars)			
1971IV	1.1	0.8	0.3	0.2
1972IV	4.9	2.7	2.3	0.6
1973IV	5.6	4.6	1.0	1.5
1974II	5.4	5.2	0.2	2.6

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

NOTE: Profits are measured before taxes and include the inventory valuation adjustment; output is measured in terms of value added as reported in the national income accounts.

[a]This increment to profits is calculated as the difference between the increase in profits that would be sufficient to maintain constant percent profit margins and the increase that would be sufficient only to keep profits per unit of real output constant. It represents the amount by which profits would need to be augmented to compensate for inflation in order to avoid a reduction in the profits share.

[b]Cumulative profit changes are smaller than the sum of quarterly changes by approximately a factor of four, since quarterly changes are expressed at annual rates, and quarterly changes may not sum to totals of four times cumulative changes because of rounding. Cumulative totals for components may also differ because they were calculated on the basis of the percent margin prevailing in the first quarter of 1971.

gin (column 2, Table 6). About half of this component of profits reflected rising prices (column 4, Table 6) with the other half reflecting increased real output. Only a tiny fraction of the increase in profits in this quarter was accounted for by an increase in percent profit margins (column 3, Table 6). Also by the second quarter of 1974, the profits share of gross product originating in nonfinancial corporations was only 10.5 percent, compared to an average of 15.2 percent during the 1960s.

There was a great deal of variation in overall changes in profits during the period, however, and in the extent to which such changes reflected changes in percent profit margins. By the end of 1972, wider percent profit margins accounted for nearly as much of the cumulative increase in profits as the increased value of output at constant percent margins. On the other hand, by the second quarter of 1974 wider margins accounted for only a minute share of the cumulative increase in profits (columns 2 and 3, Table 6). The extent to which profits increase consistent with the objective of maintaining constant percent margins reflected rising real output or rising prices also shifted markedly during the period. The calculated increment to profits resulting from the difference between constant percent and constant dollar profit margins was very small through 1972 ($0.6 billion out of $2.7 billion), but it increased sharply when prices were rising more rapidly during 1973 and early 1974. By the second quarter of 1974, half of the profits increase associated with maintaining constant percent margins was accounted for by higher prices instead of by increased real output.

The difference between constant percent and constant dollar profit margins per unit of real output corresponds closely in concept to the difference between price adjustments to reflect percent pass-through or price adjustments to reflect dollar-for-dollar pass-through of increased costs. Because these calculations (column 4, Table 6) are based on value-added measures of real output, the calculated difference in profits understates the impact on profits of the difference in cost pass-through concepts. The impact of the difference between percentage and dollar-for-dollar cost pass-through may be understated by approximately a factor of two when the costs of materials inputs are rising at about the same rate as costs of the value-added component of prices.

Another limitation in the applicability of these aggregative comparisons of percent and dollar-for-dollar cost pass-throughs is that the cost pass-through regulations were applied in different ways for particular sectors. For example, the retail and wholesale sectors were permitted to apply percent markups to the cost of merchan-

TABLE 1 Profit Margins and Changes in Output per Man-Hour of Nonfinancial Corporations, 1971I–1974II

	Percent Change in Output per Man-Hour (1)	Diff. between Trend Rate and Short-Term Output per Man-Hour Change[a] (2)	Diff. in Rates of Output per Man-Hour Change[b] (3)	Change in Percent Profit Margin[c] (4)
Year and Quarter	Quarterly Output per Man-Hour		Quarterly Calculated Increments to Profits (billions of dollars, annual rates)	
1971II	0.9	0.1	0.3	1.5
III	1.6	0.8	2.9	0.4
IV	0.7	−0.1	−0.4	−0.7
1972I	1.8	1.0	3.8	2.8
II	1.0	0.2	0.9	0.5
III	1.1	0.3	1.2	1.1
IV	1.1	0.3	1.2	3.3
1973I	2.0	1.2	5.0	0.1
II	0.2	−0.6	−2.8	−1.4
III	0.2	−0.6	−2.9	−1.8
IV	−0.6	−1.5	−6.7	−1.9
1974I	−1.4	−2.2	−10.3	−4.6
II	0.3	−0.5	−2.3	1.3
Cumulative Periods[d]	Cumulative Output per Man-Hour		Cumulative Calculated Increments to Profits[e] (billions of dollars)	
1971IV	3.2	0.8	0.7	0.3
1972IV	8.3	2.6	2.5	2.3
1973IV	9.9	1.0	0.6	1.0
1974II	8.9	−1.6	−2.5	0.2

SOURCE: Computed from data from U.S. Department of Commerce, Bureau of Economic Analysis, and Department of Labor, Bureau of Labor Statistics.

[a] The trend rate of increase in output per man-hour was calculated as the compound quarterly rate of increase from 1958 through 1969, the period used by the Price Commission for developing rates of productivity growth to be applied in estimating net increases in labor costs. The quarterly trend rate for the nonfinancial corporate sector was 0.8 percent (3.2 percent annually).

[b] Increments to profits attributed to the difference between short-term and trend rates of change in output per man-hour are calculated by applying the differential in output per man-hour changes to the compensation share of value added in the nonfinancial corporate sector.

[c] From column 3, Table 6.

[d] Quarterly changes may not sum to cumulative totals because of rounding.

[e] Cumulative increments to profits are smaller than the sum of quarterly changes by

dise throughout this period as well as in earlier stabilization programs. In certain sectors, such as meat packing, where prices of major inputs were highly volatile, price adjustments were permitted during the entire period only to reflect dollar-for-dollar pass-through of major input costs. It is difficult to be precise about the quantitative influence of constant percent or constant dollar profit margins, but it is worth noting that the impact of the difference between percent and dollar-for-dollar cost pass-through is disproportionately larger for profit margins than for price changes. The increment to profits necessary to maintain constant percent profit margins, by reflecting the rise in prices at a given output level, accounted for about 50 percent of the increase in profits over the entire period but only 1.5 percentage points of the 15 percent rise in prices (columns 1 and 4, Table 8, below).

Short-term changes in output per man-hour resulted in changes in the relationship between revenues and costs that could be reflected in changes in profit margins within the framework of the stabilization regulations. This source of short-term variation in profit margins was most important during the stabilization program, and it is also more readily susceptible to quantification than other possible sources such as changes in product mix or input substitution. In reviewing requests for price increases, changes in short-term production and in sales volume were taken into account to some extent, but their influence was small and difficult to estimate in the absence of information on actual and expected sales volume. Under the stabilization regulations, net increases in labor costs were calculated on the basis of trend rates of increase in output per man-hour. The difference between changes in short-term output per man-hour and these trend rates was used to calculate the potential influence on profits from this source. The results are shown in Table 7 along with actual changes in profit margins. This source more than accounts for the actual widening of profit margins for nonfinancial corporations through 1972, and it accounts for about half of the smaller cumulative rise in profit margins through 1973 (columns 3 and 4, Table 7). After the first quarter of 1973, percent profit margins declined as increases in output per man-hour fell far below trend rates.

---

approximately a factor of 3 because quarterly changes are expressed in terms of annual rates for compensation and profits. Quarterly changes may not sum to totals of four times cumulative changes because cumulative increments to profits were computed on the basis of the percent margin prevailing in the first quarter of 1971.

Changes in profit margins during the entire period seem to be mainly attributable to cyclical developments, including changes in output per man-hour, instead of to changes in the controls. The rise in profit margins from the fourth quarter of 1971 to the first quarter of 1972 may have been influenced by the transition to Phase II, since prices also rose sharply, but it could also be accounted for by the sharp rise in output per man-hour. Similarly, the decline in profit margins in the last half of 1973 might be partly attributable to the second freeze and dollar-for-dollar pass-through of costs in Phase IV, but the decline had begun in the second quarter and could have been expected to continue on the basis of larger increases in costs.

The data on profit margin changes do not support the view that prices increased more rapidly than costs during Phase III. The acceleration of inflation that began in 1973 was in fact accompanied by a sharp reduction in percent profit margin expansion in the first quarter when increases in materials input costs began accelerating. Percent profit margins declined after the first quarter of 1973 as prices, unit labor costs, and other costs rose more rapidly.

Profit data on an annual basis for selected industries indicate that a major part of the 1972 increase in profits was accounted for by manufacturing; and in 1973, by agriculture. In each case, much of the increase in profits could be attributed to wider profit margins. However, the amount of profits attributable to wider profit margins in manufacturing over the entire period, $6.9 billion, was small compared to the amount accounted for by large increases in short-term productivity, $12.4 billion. In addition, because of the large size of the manufacturing sector, the increase in prices that was accompanied by a widening of profit margins was smaller in that sector than in agriculture. With prices of raw agricultural products exempt, almost thirty percentage points of the increase in the price deflator for agriculture was associated with wider margins on value added, mainly during 1973. These data also show a slight narrowing of percent margins for retail and wholesale trade in 1972 and 1973, even though both sectors were formally under regulations permitting constant percent markups over costs.[40]

The profit margin data show a broad pattern of conformity with the regulations during the period of controls. In using profit data to examine the consistency of cost and price increases, it must be recognized that there are limitations resulting from the presence of long-term contracts, the existence of inventories, and the possibili-

ties for hedging in purchasing and pricing policies. The data clearly show the importance of the unusually rapid short-term productivity gains during the early part of the period in providing additional real income that was accrued in the form of a slowing of price increases and a rise in profit margins. They also show that the expansion in profit margins that occurred during 1972 was consistent with the stabilization regulations in force, and that the acceleration in inflation occurring in early 1973 during Phase III was not accompanied by the wider profit margins that would be expected if business firms were raising prices more rapidly than their costs were increasing.

The limited potential of controls as a tool to improve price performance by squeezing profit margins is illustrated by the data on prices in Table 8. A major reason for the insensitivity of prices to profit margin changes is that profits account for only a small fraction of the value of output. Profits accounted for less than 10 percent of output of nonfinancial corporations in 1970. The shift in output per man-hour and profit margin trends in early 1973 reduced the portion of the increase in prices related to changes in percent profit margins, but the shift to more rapid inflation increased the influence on prices of maintenance of percent margins. Expansion of percent margins after the first quarter of 1971, when they were near a cyclical as well as a historical low, accounted for less than one percentage point of the 8.7 percent cumulative rise in prices by the end of 1973, and for only 0.3 of the 15 percent rise by the second quarter of 1974. Maintenance of percent margins, through a rise in profits per unit of real output sufficient to compensate for the rise in output prices, accounted for an additional percentage point by the end of 1973 and 1.5 percentage points by the second quarter of 1974. These data show that the consequences of limiting percent profit margins to their cyclically low level at the beginning of 1971, or reducing percent margins through erosion of the share of profits in real terms, could have significant effects both on the rates of return on investment and on cash flow available for investment in production capacity, even though price inflation in the corporate nonfinancial sector would not have been significantly affected. Moreover, the proportionate effect on consumer prices of a squeeze on profits would have been much smaller than for prices in the corporate nonfinancial sector during 1971–1974 because prices of farm products and imported commodities (which are largely external to the corporate nonfinancial sector) were responsible for much of the acceleration in inflation that occurred in 1973.

TABLE 8 Prices and Their Relation to Changes in Profits and in Output per Man-Hour of Nonfinancial Corporations, 1971I–1974II

Year and Quarter	Percent Change in Implicit Price Deflator (1)	Change in Percent Profit Margin[a] (2)	Difference in Rates of Change of Output per Man-Hour[b] (3)	Difference between Constant Percent and Constant Dollar Profit Margin[c] (4)
	Quarterly Calculated Increments to Price Change			
1971III	0.8	0.2	0.1	0.1
III	0.6	0.1	0.5	0.1
IV	0.1	−0.1	−0.1	0.0
1972I	0.9	0.5	0.7	0.1
II	0.2	0.1	0.1	0.0
III	0.4	0.2	0.2	0.0
IV	0.6	0.5	0.2	0.1
1973I	0.7	0.0	0.8	0.1
II	1.1	−0.2	−0.4	0.1
III	1.1	−0.3	−0.4	0.1
IV	1.8	−0.3	−1.0	0.2
1974I	2.7	−0.7	−1.5	0.3
II	3.0	0.2	−0.3	0.3
Cumulative Period[d]	Cumulative Calculated Increments to Price Change			
1971IV	1.4	0.2	0.5	0.2
1972IV	3.7	1.5	1.7	0.4
1973IV	8.7	0.8	0.6	0.9
1974II	15.0	0.3	−1.2	1.5

SOURCE: Same as for Table 7.

[a] Calculations based on column 3, Table 6.

[b] Calculations based on column 3, Table 7.

[c] Calculations based on column 4, Table 6.

[d] Quarterly changes may not sum to cumulative totals because of rounding, and cumulative totals for columns 2 and 4 may differ in addition because they are cumulated on the basis of the percent margin prevailing in the first quarter of 1971.

Profit Margin Limitations

Prices could be increased under the stabilization regulations only if an increase in allowable costs could be demonstrated. While cost increases were a necessary condition for price increases, they were not a sufficient condition since limitations on profit margins were imposed in some form throughout the program. Realized profit margins as a percentage of sales were limited to levels achieved during a base period. The limitation was applied to individual firms and computed for the consolidated accounts of the parent firm instead of separately by divisions, profit centers, or other accounting entities. Base-period limits for Phase II were established by computing the average profit margin for the best two of the three fiscal years completed immediately before August 15, 1971, with the inclusion of more recently completed fiscal years permitted after Phase III began in 1973.

Profit margin positions when the stabilization program began and developments during the course of the program can be illustrated in general terms by Federal Trade Commission data for manufacturing corporations (Table 9). These data show that profit margins in the third quarter of 1971, when the stabilization program began, were on average considerably below the apparent base-period limits. For example, profit margins for all manufacturing averaged 8.6 percent in 1968 and 1969 compared to 6.9 percent in the third quarter of 1971 and 7.0 percent for the year. Relative to base-period limits, profit margins were then apparently highest for food and kindred products and tobacco manufacturers, with considerable room for expansion toward base-period limits in most other sectors.

During 1972, manufacturing profit margins rose from 7.1 to 7.7 percent, remaining on average well below base-period limits. Sectors in which margins rose most markedly toward the limits included printing and publishing, rubber and plastics products, and lumber. Profit margins exceeding base-period limits were reported during 1972 mainly by firms specializing in lumber production, although this is not apparent in the aggregate data.

Profit margins on average moved close to base-period levels in 1973, particularly in nondurable goods manufacturing. Early in the year, margins rose markedly in the lumber sector (and later in the year, in several other sectors) to levels apparently above base-period limits. These profit data are not adjusted for inventory profits, in contrast to the data from the national income accounts discussed in the preceding section. In their treatment of inventory profits these profit data are consistent with the computational pro-

TABLE 9 Relation of Profits before Taxes to Sales of All Manufacturing Corporations, by Industry Group, 1968–1974 (percent)

Year or Quarter	All Manufacturing Corporations	Nondurable Goods										
		Total Nondurable	Food and Kindred Products	Tobacco Manufactures	Textile Mill Products	Paper and Allied Products	Printing and Publishing	Chemicals and Allied Products	Industrial Chemicals and Synthetics	Drugs	Petroleum and Coal Products	Rubber and Miscellaneous Plastic Products
1968	8.8	8.4	4.9	11.4	6.1	8.2	7.8	12.5	11.2	18.6	12.0	8.3
1969	8.4	7.9	4.9	10.7	5.7	8.1	9.0	12.1	10.7	18.5	11.7	7.0
1970	6.8	7.3	4.8	11.2	4.1	5.7	8.0	10.7	8.5	17.2	11.0	5.1
1971	7.0	7.2	4.9	11.5	4.6	4.3	7.9	10.8	8.5	17.0	9.5	6.6
1972	7.5	7.2	4.6	11.0	4.8	6.8	8.7	11.2	9.3	17.8	8.5	7.4
1973	8.2	8.2	4.8	11.6	5.3	9.4	8.7	12.3	11.7	18.6	11.1	7.2
1971III	6.9	7.5	5.2	12.1	4.7	4.5	8.0	11.1	8.5	17.4	10.2	6.5
IV	6.9	6.7	4.6	11.2	5.9	3.2	9.0	10.0	6.5	17.5	8.1	6.8
1972I	7.1	6.9	4.4	11.0	4.6	5.4	6.3	11.6	9.6	19.0	8.3	7.3
II	7.8	7.1	4.8	11.5	4.6	7.6	8.9	11.1	10.3	18.1	7.1	8.0
III	7.2	7.3	4.7	11.0	4.8	6.5	9.1	11.5	9.0	19.1	8.7	6.9
IV	7.7	7.5	4.6	10.5	5.0	7.5	10.2	10.9	8.5	16.9	9.7	7.3
1973I	7.9	7.2	4.4	10.3	5.2	8.0	7.5	12.2	11.3	18.6	8.4	6.9
II	8.7	7.9	4.7	10.6	6.0	10.4	8.3	12.3	12.6	17.5	9.6	8.2
III	7.7	7.8	4.8	10.7	5.1	9.8	9.1	12.1	10.9	18.8	10.5	5.8
IV	8.7	9.6	5.2	15.7	4.8	9.2	9.8	12.8	11.9	20.0	16.6	7.7
1974I	8.9	10.6	4.5	15.2	5.8	10.9	7.3	14.5	14.1	21.0	16.6	7.9
II	9.6	11.1	4.6	18.1	6.5	13.4	9.7	15.6	16.5	20.8	14.5	9.8
Base period limit[a]	8.6	8.2	4.9	11.3	5.9	8.2	8.5	12.3	11.0	18.6	11.8	7.6

TABLE 9 (concluded)

Year or Quarter	Durable Goods													
	Total Durable	Transportation Equipment	Motor Vehicles and Equipment	Aircraft and Parts	Electrical Machinery, Equipment, and Supplies	Machinery (excl. Electrical)	Fabricated Metal Products	Primary Metal Industries	Primary Iron and Steel Industries	Primary Nonferrous Metal Industries	Stone, Clay, and Glass Products	Lumber	Instruments and Related Products	Misc. Mfg. (incl. Ordnance)
1968	9.1	9.1	10.9	6.0	8.1	10.7	7.7	8.4	7.5	9.7	9.3	8.4	15.4	7.7
1969	8.6	7.8	10.1	5.7	7.6	10.8	7.2	8.5	7.0	10.4	8.7	7.9	15.1	7.2
1970	6.3	3.8	4.0	3.5	6.1	9.2	5.8	5.9	3.6	8.9	6.6	4.4	13.7	6.3
1971	6.9	7.1	8.7	3.2	6.4	8.3	5.7	4.3	4.1	4.7	7.7	7.1	13.3	5.9
1972	7.7	7.6	9.1	4.4	7.2	9.3	6.5	5.2	5.0	5.6	8.0	8.0	14.5	6.3
1973	8.3	7.3	8.6	4.9	7.9	10.4	7.4	7.3	6.8	8.0	8.3	10.0	15.4	6.3
1971III	6.3	4.7	4.8	4.0	6.6	8.0	6.3	0.8	0.2	1.7	9.3	7.9	14.7	7.1
IV	7.0	7.7	9.8	2.6	6.7	8.8	4.5	3.1	3.0	3.4	6.9	6.7	13.6	4.6
1972I	7.3	8.3	10.4	3.9	6.4	8.8	5.9	4.6	4.0	5.7	5.6	7.0	13.0	5.2
II	8.6	9.4	11.2	5.1	7.1	9.7	7.2	6.2	5.9	6.8	9.6	9.1	14.9	6.7
III	7.1	4.1	4.0	4.3	7.1	9.5	6.9	4.2	4.0	4.6	9.5	9.1	15.5	6.3
IV	7.8	8.0	9.7	4.2	8.0	9.1	6.0	5.7	5.9	5.3	7.0	6.7	14.5	6.9
1973I	8.5	9.5	11.3	4.9	7.6	10.0	6.9	6.2	5.9	6.8	6.2	9.9	14.4	4.6
II	9.3	9.4	11.2	5.5	7.8	10.6	7.9	7.6	7.3	8.1	9.4	12.8	15.5	6.9
III	7.6	3.8	3.8	4.8	7.8	10.0	7.3	6.8	6.7	7.2	9.3	10.2	16.0	6.6
IV	7.8	5.9	6.8	4.4	8.6	10.9	7.2	8.3	7.4	9.9	7.9	7.2	15.7	6.8
1974I	7.5	4.6	4.2	5.6	7.5	10.2	7.4	9.1	7.6	11.3	5.7	–	15.9	7.6
II	8.5	5.9	5.7	5.7	7.4	11.1	9.4	12.1	11.4	13.2	9.4	–	15.3	8.1
Base period limit[a]	8.8	8.5	10.5	5.8	7.8	10.8	7.4	8.4	7.2	10.0	9.0	8.2	15.2	7.4

SOURCE: Federal Trade Commission, *Quarterly Financial Reports for Manufacturing Corporations*, 1968–1974.

[a] Estimated for each industry by computing the average percent profit margin for the two years in which profit margins were highest from calendar years 1968 through 1970.

cedures in the stabilization regulations. There are several reasons, however, why these aggregate data on average profit margins for industries provide only a general indication of the degree to which realized profit margins for individual firms were consistent with the requirements for compliance with the stabilization regulations.

Comparisons of base-period profit margin limits for individual firms with their realized profit margins could be significantly different from comparisons of industry averages. Individual firms could choose their most favorable two years, and, in addition, many firms are on a fiscal- rather than a calendar-year basis. Thus, the actual difference between realized profit margins and base-period limits may have been wider than would be suggested by computations based on industry-sector averages for two calendar years. On the other hand, the variability of profit margins for individual firms is much larger than for the averages, and realized profit margins may exceed base-period limits for some firms even though this is not reflected in an industry average.

The data on sales and profits underlying published industry profit margins are also more inclusive than the data specified in the stabilization regulations. For example, subsidiaries based abroad and mainly engaged in foreign operations were excluded from profit margin computations under the stabilization regulations, and the dollar devaluations in 1971 and 1973 significantly increased reported profits for foreign subsidiaries of international corporations. Moreover, farming, life insurance, and public utilities operations were excluded if they were separate accounting entities. In general, the broad definition of firms applied under the stabilization regulations also obscures comparisons with data based on different definitions.

Realized profit margins could, in addition, under certain conditions exceed base-period profit margin limits without violating the stabilization regulations. During Phase II, profit margin limitations were not applied to firms that raised no prices above base-period levels (prices charged in the thirty days before August 15, 1971, or on May 25, 1970). During Phase III, profit margin limits were not applied unless the firm increased prices by at least an average of 1.5 percent above levels authorized on January 10, 1973, and during Phase IV they were not applied to firms that had not increased prices above levels legally prevailing during the mid-1973 freeze. A significant fraction of firms did not raise their prices above base-period levels during 1972, and in late 1973 sales and profits attributable to exempt prices in areas such as exports, lumber, and other sectors exempted later could be excluded from profit margin com-

putations. Firms that had increased prices, but later reduced them sufficiently to compensate for the revenue received from these price increases, were also relieved of profit margin limits. In addition, relief from profit margin limitations or adjustments to base-period limits were often granted through the exceptions process. Relief of this sort reflected well-documented special circumstances experienced by a firm, for example, a major change in its financial structure. The special rules applicable to firms experiencing losses or very low profits could also raise average profit margins without placing the firms at the low-profit end of the distribution in violation of the regulations. It may be concluded that the published aggregate profit margin data cannot be easily translated into evidence on the extent of compliance with the profit margin limits under the stabilization rules.

Beginning in the second quarter of 1972, orders to reduce prices and (when this was possible) to make refunds were issued to firms whose profit margins exceeded base-period levels. Occasionally, there were denials of requests for price increases from firms approaching base-period limits, with the most noteworthy cases being those for two major auto companies in late 1972. By the end of 1972, only a small number of firms showed profit margins in excess of base-period limits, and they were heavily concentrated in the lumber and construction sectors. In construction, the immediate linkage between profit margins and pricing was weak, and special procedures were eventually developed for that sector. In other sectors, remedial actions included refunds where feasible, price reductions where markets would not be unduly disrupted, or payments to the Treasury to reflect profit margin overages. In many instances, the presence of special circumstances that had not been dealt with through the exceptions process led to negotiation of compromise settlements of profit margin overage problems.

The marked acceleration of price increases in early 1973 and the large increases in reported profits for the first quarter of 1973 led many observers to conclude that there was widespread noncompliance with cost-justification and profit margin regulations.[41] Yet reports on prices, costs, and profits for the first part of the year showed few instances of probable violation of the stabilization regulations.[42] In addition, since cumulative profit margins in these reports in most instances did not reflect results for a completed fiscal year, many of the apparent profit margin overages may have been attributable to seasonal factors.

Profit margin limits were applied throughout the remainder of the program, with remedies prescribed when base-period limits

were exceeded and denial of requests for price increases when firms were approaching base-period limits. However, the sector-by-sector decontrol process during Phase IV complicated the application of profit margin limits, because exempted activities could be excluded from profit margin computations. Often only crude adjustments could be made by firms with production operations in several sectors, some of which were exempted, and application of profit margin comparisons became increasingly arbitrary and complicated during the decontrol process.

V. CONTROLS AND EFFICIENCY

The concept of efficiency is central to economics, and the general principle that competitively determined prices and wages are consistent with efficient resource usage is well known. Price and wage controls can give rise to inefficient resource use, because suppression of price and wage levels also usually influences interrelationships between them. Controls can introduce inefficient business practices, and lead to patterns of resource use that add to inefficiency arising from existing market imperfections. Moreover, their influence is extended over a major share of the economy. The magnitude of the costs that may be imposed by controls is not easily estimated, but constantly changing conditions in the marketplace make it virtually impossible to manage a system of stringent controls without creating distortions in resource use. Particular instances of market disruptions, misalignment of prices, wasteful business practices, or inequitable wage relationships resulting from controls have usually become evident, but public reaction to these costs builds slowly because most of the costs are hidden and not easily quantified.

Unfortunately, most of the evidence on distortions resulting from controls is fragmentary and anecdotal and does not lend itself to quantification of the resultant costs. Yet the symptoms of inefficiency were sufficiently pervasive and their potential cost sufficiently important to merit a brief general discussion of the problem in addition to that contained in the preceding sections.

Symptoms of Inefficiency

During the first year of controls, there was some evidence that they were interfering with the price adjustments necessary to maintain

efficiency and avoid shortages, but the evidence was limited mostly to the lumber sector and to a small number of situations in which pricing to reflect increases in current production costs led either to dispersion in prices for similar products or to prices too low to satisfy current demand.[43] The stabilization regulations were based on the idea that price adjustments should be allowed to reflect cost increases, with shifts in demand in most instances expected to be accommodated through changes in output. It became apparent in the early months of the program, however, that situations would arise in which application of the regulations would forestall some price increases that were necessary to maintain efficiency.[44]

In markets with relatively inelastic supply, short-term demand changes that were large relative to short-term cost increases created one class of problems under cost pass-through regulations. Pricing of radio and television advertising, for example, had traditionally reflected shifts in audience ratings of shows in addition to more stable factors, and these demand-related changes were not accompanied by short-term cost changes. Since export prices were exempt from controls, demand increases for internationally traded products created incentives to export and opportunities to earn windfall profits for traders buying at controlled domestic prices and exporting at higher world prices.

Differences among industries and among the structures of firms within industries sometimes complicated the application of cost pass-through regulations. In the case of sugar, some fruits and vegetables, and, later, lumber, vertically integrated firms often experienced no short-term cost increases that could be used to justify higher prices, while other firms purchasing inputs such as raw agricultural products and standing timber in exempt markets were bidding up raw materials input costs and raising prices proportionately. The presence of large inventories in some cases also weakened the linkage between cost increases and current demand conditions. In some sectors in which prices of major inputs were not exempt, short-term demand increases created an incentive for firms to increase current operating costs (such as wages), both to provide the basis for price increases and to avoid increasing profits above base-period levels. The importance of this indirect influence on wages in the economy is uncertain, but at least one case in which a wage adjustment was apparently motivated mainly by profit margin considerations was brought to the attention of the Cost of Living Council in 1973.[45]

The problem of prices on world markets rising above prices permitted under domestic controls, thus stimulating increased exports,

first appeared for cattle hides during the ninety-day freeze. Similar conditions developed when world prices moved above domestic prices for several products (such as lumber, zinc, and molasses) during 1972. While rising prices on world markets posed few difficulties for domestic price controls during 1972, the surge in dollar prices of most commodities traded in international markets during 1973 (including the prices of metals, petrochemicals, and fertilizer) posed problems for any system of domestic controls.

Extension of controls to raw agricultural commodities would have created similar problems in that sector.[46] The stringent limits on domestic prices after the June 1973 freeze, with world prices continuing to rise, threatened diversion of domestically produced supplies to export markets. Exemption from domestic controls was granted for commodities such as copper scrap and a number of other nonferrous metals. Prices of fertilizer and petrochemical products were also exempted so as to reduce incentives for trade diversion, and price adjustments to levels above those generally permitted under the standards were granted for other commodities such as copper and aluminum.[47]

When prices of more and more commodities were held below market clearing levels in late 1973, symptoms of inefficiency became increasingly widespread and diverse. Curtailment of domestic supply was sometimes threatened by increased exports, reduced production to avoid losses, and failure to expand production through use of marginal production capacity. Lack of availability and wide differences in prices of materials inputs complicated production planning and threatened to disrupt production schedules. Distribution and purchasing operations were complicated by multiple prices and instances of bartering in order to reduce costs or obtain scarce materials, and black markets were frequently reported.[48] Such distortions were instrumental in shaping public attitudes toward decontrol.

Cost Pass-Through and Product Mix

Limiting price increases to cost increases, instead of controlling overall processing margins with complete flexibility in relative prices, in some circumstances exacerbated shortages for certain products. For industries operating at capacity levels, incentives to shift the mix of products were created under regulations that linked price increases to cost increases, without permitting increases in some prices to offset reductions in others. These incentives were

created even though full pass-through of cost increases was permitted, and price increases to reflect these cost increases could be spread over a broad range of product lines. For cyclical reasons and because of changes in import competition or other factors, profitability of individual product lines may diverge from that of other product lines produced by the same firm. When conditions changed and demand was sufficiently strong to support expanded production of relatively more profitable lines, incentives were created for shifting production toward high-margin product lines and for raising prices for those product lines to the extent justified by overall cost increases.

During 1973, when demand levels pressed strongly on available production capacity, there were several industries in which shortages became severe for product lines that had previously been produced at low profit margins. Some users were forced to switch to higher-quality paper when lower-quality paper became unavailable.[49] Some of the most marked steel shortages were in product lines such as concrete reinforcing bars, mining roof bolts, and baling wire, which had earlier been subject to strong import competition. A wide range of petrochemical inputs and products produced by petroleum refiners were in extremely short supply, after a period in which prices in the chemical industry had been cyclically depressed. The shortages of petrochemical feedstocks were particularly noteworthy, because allocation of a disproportionate share of cost increases to these products was encouraged by the regulations that delayed price increases for gasoline, diesel fuel, and home heating oil.

Shortages

Reports of shortages were pervasive in late 1973, and the reports often attributed shortages to the price controls.[50] Shortages are the inevitable counterpart of controls that keep prices below market clearing levels in a simple, static, analytical framework, and the existence of shortages is prima facie evidence that controls are binding. Shortages have sometimes emerged, however, in strong cyclical expansions, and phenomena such as lengthening order backlogs, slower delivery schedules, and temporary unavailability of products or materials have been quite common. Thus, in an environment with rapidly changing supply conditions and strong cyclical demand, shortages and related phenomena may be partially attributable to concern with customer-supplier relationships

expressed through maintenance of relative stability in materials availability and prices.

Nevertheless, controls can exacerbate shortages by influencing demand and available supply. If controls are generally thought to be holding prices below market levels, the risk of a decline in prices of materials purchased as inputs and temporarily held in inventory is reduced, and the potential for implicit capital gains if prices are decontrolled or price increases are granted is enhanced. In addition, controls that effectively constrain prices increase the probability that essential materials or products may not be available when they are needed. This encourages users to purchase materials before they are needed and hold them temporarily in inventory as a hedge against possible disruption of production schedules. Legal limits on prices foreclose the possibility of bidding up prices to obtain essential materials when those materials are immediately necessary to maintain production schedules or to avoid delays.

If purchasing policies were significantly influenced by controls in this manner, these policies would have raised demand above normal current production requirements for products and materials in which the difference between price limits and market prices was largest and the potential for shortages greatest. A tendency for inventory buildup would be expected and it might be reflected in somewhat earlier purchases of supplies and materials by final users instead of larger inventories for manufacturers and distributors.

The pattern of inventory accumulation for all manufacturers and distributors indicates that firms were generally attempting to increase inventories in late 1973 and early 1974, even though serious shortages and prices significantly below market levels were concentrated in a limited range of basic materials and products. There were widespread reports of particular instances in which advance material purchases were made and purchasing practices were tailored to shortage conditions. There were reports from construction firms of advance delivery of concrete reinforcing bars to avoid costly delays in projects should these materials not be available on schedule.[51] In the case of petroleum products, there were reports of a buildup of propane inventories and gasoline storage, and gasoline stocks rose toward the end of each month in anticipation of the granting of new price increases.[52] There were also reports of purchases of certain scarce materials for use in bartering for other materials in short supply because prices were kept below market levels.

In 1973, when price ceilings were made applicable to individual firms instead of industry-wide, incentives may have increased for

acquiring inventories in excess of immediate production needs. Firms having established relations with suppliers constrained by low price ceilings had a strong incentive to take delivery of all supplies that they were allocated because prices from alternative sources of supply were often higher and further price increases were being granted periodically. In the fall of 1973, for example, price ceilings for domestic copper producers were 60 cents per pound. Moreover, fabricated copper products could be priced on the basis of costs ranging from 60 cents per pound for domestically produced copper or 77 cents per pound for copper scrap to over $1.00 per pound for spot market purchases of imported copper. Similar conditions prevailed for other nonferrous metals such as zinc, lead, and aluminum as well as for a variety of steel and petrochemical products.[53]

It is extremely difficult to distinguish between the influence of controls and the influence of cyclical factors on the widespread incidence of shortages in 1973. The changes in market conditions resulting from shifts in supply or demand were the underlying forces creating pressures for either higher prices or shortages. It is possible that the controls themselves made an independent contribution to the problem by raising demand for inventories, reducing domestic supply through diversion to export markets, and weakening price incentives to expand production. Broad indicators such as unfilled orders and the ratio of unfilled orders to shipments were cyclically strong, but they may themselves have been influenced by the existence of controls. While the unusual pervasiveness of shortages in 1973 is strong evidence that controls contributed to their severity, the controls may in additon have made shortages more visible by providing a focal point for public attention.[54]

Business Practices

There are various ways in which the controls may have altered business practices and decisions in addition to their direct influence on prices. It is difficult to judge the importance of these effects either for their short-term costs or for their longer-term influence. Some effects, such as changes in accounting practices to obtain greater flexibility for price increases or changes in production methods or product mix, mainly involve short-term costs. The costs of other changes, such as those involved in the consequences of changes in investment decisions or pricing practices and market structure, may become evident only after a period of several years.

Straightforward methods can be used to estimate costs imposed by changes in cost allocation or accounting procedures designed to avoid the full impact of controls regulations or that resulted from the need to develop specific information for review by stabilization authorities and supporting data for compliance auditing. Business practices that led to inefficient real resource use in production and distribution imposed costs that are more difficult to measure. Purchasing policies designed to hedge against shortages, or disruption of smooth production flows when shortages were realized, imposed costs that are more obvious but not necessarily more important than the costs of inefficient patterns of input use. The emergence of bartering arrangements as a substitute for transactions in the marketplace contributed to excessively large inventories, complicated marketing by increasing information and search costs necessary to assure timely delivery at the lowest available prices, and led to less efficient distribution than could be expected under uniform prices in the marketplace.

An example from ferrous scrap markets illustrates how controls can reduce efficiency. Steel scrap generated as a by-product of production operations for large firms was subject to price controls, but scrap collected from obsolete or worn-out items was not. Covering all of the junk dealers in the country was impractical, and higher prices in that market could stimulate increased scrap collection. Inefficiency in scrap distribution occurred when scrap subject to controls was sold through bartering arrangements in exchange for scarce items that it was used to produce, such as concrete reinforcement bars. In products produced from steel scrap, distribution inefficiencies occurred in response to wide differences in prices. These prices reflected differences in production costs that depended on the source and cost of the scrap input as well as on the fraction of scrap used in furnaces. Another reported business practice, for which costs imposed are more easily ascertainable, was transshipment of scrap from an industrial plant at one location to steelmaking facilities owned by the same company at another location to avoid sale of the scrap at controlled prices at one market location and purchases of a similar quantity at uncontrolled prices at another.[55]

It was frequently alleged that controls were adversely affecting production levels, particularly when profit margin limits were an effective constraint. Evidence based on production levels attained is ambiguous because the absolute limits on levels of production capability are usually impossible to define precisely for any firm or industry. In addition, firms operate in a dynamic and changing

environment in which they must make decisions regarding small adjustments in the production process, expansion of some portion of production operations, or cutbacks in output by scaling down less efficient operations or closing down obsolescent plants. Over time, marginal changes in current production through such decisions could have a significant offsetting influence on price movements. Thus, it is possible that delays in price adjustments and price ceilings could attenuate production responses that would otherwise help to smooth adjustments in prices to changes in demand.

This discussion of controls and their costs can be summarized by brief consideration of two points. The first point is that the short-run costs of controls—at least as they were administered during the Economic Stabilization Program—were apparently not enormous. Evidence of adverse effects during the period of controls is generally not readily apparent in broad measures of production or other indicators either for individual industries or for the overall economy. Thus, in spite of widespread reports of shortages, inefficient business practices, and misallocation of resources, normal measures of economic activity for most sectors did not show pronounced adverse effects that could be directly traced to controls. The second point is that the costs of controls are nonetheless real, and they are not adequately captured by reference only to normal measures of production and economic activity. Resources are used to administer controls, with costs borne both by the government and the private sector. Symptoms of inefficiency that can obviously be traced to controls impose additional real costs, even though these costs are difficult to quantify. In addition, costs of a more subtle type are obscured by normal measures of economic activity because the prices that are used in computing the value of economic output can be less closely identified with the value placed by society on measures of economic output as prices diverge more and more from market values.

VI. CONCLUDING DISCUSSION

Whatever direct impact the controls regulations had on wages and prices, controls also influenced the context in which economic policy was made. To the extent that the controls temporarily suppressed price and wage increases, the full influence of market forces became evident to policymakers and the private sector only

after some delay. To the extent that market pressures in specific sectors led to rapid price increases or dislocations under the controls, high-level attention was focused on possible policy changes that could influence supply or demand to relieve the pressures placed on controls by a market environment that was forcing prices up. Thus, the controls at times facilitated the development of specific policies that could help to reduce market pressures by shifting supply or demand—policies that were usually more complex but more promising than a simple limitation of short-run price or wage increases. Issues raised by this broad economic role of controls may be of more lasting importance than quantification of their direct effects on prices and wages in any period.

Controls and Demand Management

The possibility that the existence of a program of wage and price controls may have influenced the expansiveness of monetary and fiscal policy is of particular importance for evaluating the full influence of controls on inflation.[56] Indeed, one of the thorniest issues in any attempt to assess the quantitative effects of controls is the issue of what components of economic policy should be treated as independent of controls. It is possible, for example, that controls were viewed as providing some short-run insurance against inflation, thereby shifting the balance toward accepting the risks of more expansionary policies than would have been planned in their absence. Controls may also have suppressed inflation sufficiently to mask for a time inflationary pressures building up in the economy, and consequently they may have delayed a recognition by policymakers that less expansionary policies were called for.

The effect that controls may have had on macroeconomic policy can be explored by examining some evidence concerning the period 1971–1974. Even though no definitive conclusions can be drawn from them, official statements suggest that controls were regarded as providing a measure of protection against inflation, thereby permitting a more expansionary pattern of policies than would otherwise have been considered prudent.[57] The imposition of controls was also accompanied by requests for investment tax credits and tax reductions to stimulate the economy. In addition, the most widely used explanation of the manner in which controls were expected to help reduce inflation was that a major portion of the continuing inflation in 1971 could be attributed to the lingering effects of past inflation. The price and wage projections from stand-

ard models made it difficult to account for the rate at which inflation was occurring prior to the control period on the basis of demand conditions prevailing before controls were imposed. The controls were viewed as reducing expectations of inflation by providing a period of lower inflation more consistent with the degree of slack in labor and product markets. Yet the risks of placing too much reliance on controls and moving toward overly expansive policies were also explicitly recognized and cautioned against.[58]

The limits that were placed on prices under controls, along with incentives to keep prices down voluntarily (either out of a spirit of cooperation or to avoid confrontation and possible audit for violations), inhibited market testing. Market signals were muted, and information on accumulating market pressures was received only after delays which added new uncertainty to government policy planning. The importance of this influence of controls during 1971–1974 is uncertain, but it may have delayed a turn toward more restrictive demand management policies.

Both monetary and fiscal policies were expansionary during the early phases of controls. These policies were generally viewed as appropriate for stimulating higher output and employment levels, particularly in the early stages of the recovery when fiscal policy was most expansionary. Federal deficits averaged $19 billion in 1971 and 1972, although the full-employment deficit averaged only $5 billion, and small surpluses were achieved on both bases in 1973.[59] The net expansionary effect on the budget of tax and expenditure changes introduced with the New Economic Policy was estimated as $1.1 billion for fiscal year 1972,[60] a small impact compared to actual deficits at that time. Monetary policy remained expansionary during almost the entire period; the money supply increased at an average rate of about 7 percent, but the most rapid expansion took place in the latter part of 1972. Although in retrospect these policies were overly expansionary, particularly in the latter part of the period, the mistake appears to have resulted mainly from the deficiencies of economic forecasts rather than from policies that differed from those on which the forecasts were based. The upsurge in inflation that began in 1973 was not foreseen by professional forecasters.[61]

Controls and Other Stabilization Policy Initiatives

The introduction of controls in the U.S. economy, and intermittently of incomes policies of various kinds in other countries, is less

a tribute to their demonstrated durability and effectiveness than to the lack of constructive alternatives for responding to public pressures to "do something" that would have a visible and direct effect on inflation. It is appropriate that these pressures should converge on the government in democratic societies, and the government should give high priority to actions and policies that can help to contain inflation. Whether the imposition of generalized wage and price controls is the most constructive response in most instances, however, is open to question. It would be desirable to place more emphasis on the development of imaginative policies that would help to identify and attack the real economic problems of our society. Policy approaches that could help to increase supply, reduce costs, facilitate adjustment, or improve productivity would work more slowly and indirectly to reduce inflation, but such policies would also have less potential for simultaneously imposing costs through reduced efficiency and disappointing public expectations.

The establishment of a system of wage and price controls has, however, facilitated the formation of institutional structures for bringing together representatives of labor, business, the public sector, Congress, and the executive branch, in order to identify and discuss problems and explore possible approaches from different viewpoints. Since the cooperation, support, acquiescence, and expertise of each of these groups is necessary in varying degrees to the success of the effort (particularly the cooperation of organized labor), controls provide a framework for mobilizing public interest and attitudes and promoting a serious exchange of views, statements of positions, and negotiation of compromise approaches. Among the major forums for addressing broad policy issues and individual cases where the Pay Board and advisory committees of Phase II, along with earlier exploratory meetings, the Construction Industry Stabilization Committee, and the Labor-Management Advisory Committee and tripartite committees established in the food and health sectors during phases III and IV.

While the existence of a program of wage and price controls provided the immediate impetus for identifying and bringing together spokesmen representing various interests and involving them in the process of working toward solutions, controls may not have been a necessary precondition for establishing effective structures for policy discussions and problem solving. The Construction Industry Stabilization Committee (which could draw upon authority for direct controls before broader controls were imposed) and the Food Wage and Salary Committee (which could not do this

after controls for most sectors were terminated) are examples of structures developed to deal with specific problem areas. It might be possible to establish similar structures in other instances, and these might contribute to the working out of industrial relations problems and the rationalization of wage patterns without their having authority to impose mandatory controls. Structures such as labor-management advisory committees set up to play a consultative and supportive role in the formation of national economic policy have often made modest but valuable contributions. The Conference on Inflation in September 1974 represents another approach to public dialogue on problems and issues. While controls have mobilized active participation and sometimes provided support for compromises by those representing relatively narrow interests to facilitate the achievement of broader goals, cooperation and participation in the resolution of many problems might often be elicited without the spur of comprehensive price and wage controls.

During 1971–1974, the stabilization program also provided structures within the federal government for bringing together cabinet members responsive to different constituencies, a staff capability for identifying discussion policies that contributed to inflation, and a cabinet-level spokesman to focus attention on the inflationary implications of policy decisions. The main forum for internal policy review during Phase II was the Cost of Living Council itself, while the food and health policy committees were the most important forums during other phases of the program.

Controls, with their potential for market disruption, provided strong incentives to search for policy actions that could increase supply or restrain demand and thus reduce inflation. But the development of ways for the federal government to focus more attention on the inflationary consequences of government policy actions should not be dependent on controls. Controls on food prices are certainly not a necessary condition for systematic consideration of the potential impact on inflation of federal farm policy, an area in which federal government policy decisions are of major importance for production and prices. The Council on Wage and Price Stability, in some respects a successor to the Cost of Living Council, may contribute to the evolution of an internal government structure for discussion, review, and action on economic policy issues influencing inflation. The procedures for systematic budget review adopted by Congress may also contribute to improved price stability.

The resurgence of inflation in 1973 gave new impetus to a search

for ways in which productivity could be improved to relieve the pressure of rising costs on controls. Stabilization committees often provided a labor-management structure for the discussion of promising approaches and served as a catalyst for their implementation.[62] The rise toward capacity production levels, particularly in early 1973 in many of the industries producing and processing basic materials, focused attention on the question of whether sufficient resources were being devoted to capital investment. Adequacy of capital investment and the contribution that additional new investment could make to improved productivity growth were two considerations that formed the background for the sectoral decontrol process during the last part of 1973 and early 1974. Adequacy of rates of return and willingness to make new investment commitments were factors considered in decontrol decisions. Securing capacity expansion commitments as controls were removed was part of an intricate process to facilitate orderly sectoral decontrol. Investment commitments provided a supporting rationale for sequential decontrol decisions, and they represented a significant effort to coordinate policies for achieving capacity expansion needs with policies for removing controls.[63]

Because the controls imposed limits and delays on price increases and profit margins, investment decisions could have been adversely affected by controls. The influence that controls actually had on business investment, however, is not clear. Several factors suggest that their effects in reducing investment were small: the perceived short-term character of the controls, the influence of longer-term price and cost prospects on many investment decisions, the initial favorable attitude of the business community toward controls, and their apparently small impact on prices during 1972, particularly for industries producing basic materials, in which capacity limitations became most apparent in 1973. Other factors, however, suggest a larger effect: the full effect of prices in signaling increased profitability of investment was reduced to the extent that some prices were held below market levels, cash flow to finance increased investment was reduced, lower profitability impeded external financing, and incremental decisions to alter production operations or keep marginal production facilities in operation may have been affected. In the administration of controls, policies regarding investment evolved from the maintenance of as neutral a policy as possible during the early stages of controls to the explicit encouragement of new investment in decontrol decisions. There was no apparent weakness in business investment during the controls period, a fact that may be attributed mainly to the

"temporary" nature of the controls and to their initial favorable effect on public confidence.[64]

The flow of investment decisions in the economy plays a significant role in cyclical movements in demand. The investment tax credit introduced with the New Economic Policy was aimed at least as much toward stimulating demand as toward the need for providing increased productive capacity. Moreover, the capacity problem that emerged in 1973 was concentrated in the basic materials sector instead of being spread throughout the economy. These developments were apparently not foreseen by the firms in the industries concerned, and they were only belatedly recognized by the government. Improved forecasts of capacity needs could have helped to reduce inflation from this source as well as to smooth investment flow and its impact on aggregate demand. Better information on actual production capacity could have contributed to more informed assessments of capacity needs. Moreover, in developing projections of potential output to guide management in setting short-run demand policies, measures of industrial production capacity may be as important as measures of employment conditions. While there is little reason to assume that capacity needs for particular industries could be foreseen any more accurately by a government agency than by firms and investors in the private sector, more detailed and carefully assembled information might contribute to an improved assessment of intentions and prospects by both the government and private sectors.

Controls and the Public

When inflation becomes an issue of public concern, price increases for particular products come to be looked at mainly from the point of view of their contribution to inflation instead of their role in allocating resources in response to reduced supply or increased demand. The existence of formal controls provides a channel for responding to public and political pressures to deal with particular price increases. The temptation is strong to apply rigid controls to specific products, to set limits on the size of individual price increases, or to apply tight rules for sectors in which increased stringency can make no contribution to the real problem. For example, the policy response to the fact that lumber prices were rising more rapidly than other prices in 1972 was to apply more stringent controls, when decontrol might have made a greater contribution toward the underlying problem of supply. Restraining prices in sectors where demand pressures could not be

accommodated through short-term supply increases was generally inconsistent with the broad approach of Phase II, but it was as awkward politically to exempt lumber prices then as it was easy to exempt them in 1973 when lumber prices were falling.

The retention of mandatory controls on food prices for Phase III provides an example of control policy oriented more toward the presumed adverse political reaction to voluntary, self-administered controls on products whose prices were expected to rise significantly than toward the economic contribution that continued mandatory controls on such prices could be expected to make. The public impact of retention of mandatory controls on food prices was apparently small because the public was not persuaded by statements explaining how the surge in food prices could not be attributed to the shift to Phase III because mandatory controls on food prices were being continued. Until ceiling prices were imposed for meat, the continuing mandatory controls on food prices were structured to permit pass-through of costs, and they had little disruptive effect on markets because they permitted large price increases. The meat ceilings were addressed in part to another goal—preservation of wage-cost stability—and their influence on wage trends should be weighed against whatever costs they imposed on the economy. Continued mandatory controls on food prices may also have assisted the government in managing its internal policy decisions to increase supply. They may also have increased the acceptability of these policy changes to some segments of the food industry.

The shift in public attitudes reflected by congressional debate and action between the first half of 1973 and the last half of 1973 through early 1974 leads one to ask whether the political process will permit implementation of controls in a manner intended to avoid distortions and inefficiency in the economy.[65] A significant shift in public attitudes toward the merit of stringent controls did not occur until after the graphic illustrations of market disruptions and adverse effects on supply that occurred during the freeze beginning in June 1973. These demonstrations of the futility of stringent controls under the conditions prevailing then and the shortages that emerged later in the year apparently led to increased recognition that stringent controls could be counterproductive.

Limitations of Controls

One of the most fundamental but often misunderstood features of controls is the limited potential they have for contributing to lower

inflation, that is, lower inflation than would have occurred in their absence and without the adverse side effects that most of their proponents would prefer to avoid. Under emergency conditions (such as a major war effort) the scale of the diversion of resources that must be accomplished is so large that major strains are inevitable, and the inefficiency and inequity of controls and rationing may be more tolerable than other methods of securing the necessary adjustments. The goals of peacetime incomes policies in Western industrial societies, however, have been much more limited than containment of the inflationary effects of wartime resource diversion. Direct controls on prices and wages to effect the goals of incomes policies have usually been viewed as a supplement to reliance on pricing in the marketplace, although admittedly in some economies they have been viewed as an essential supplement. Draconian systems of controls have generally been avoided, except for short periods, both because their effects are not tolerated for long by the major participants in the economy and because the costs they impose on the economy exceed any benefits that might be achieved through lower inflation.

The manner in which controls are expected to affect the process of inflation is usually not carefully articulated in discussions of the possible contribution of incomes policies. In some instances reference is made to market power and to a range of discretion that may exist in establishing administered prices or negotiating wage increases for large economic units.[66] Of course, the existing structure of markets falls short of fully competitive conditions and results in price and wage relationships that depart from those that would prevail under such conditions. If controls are aimed primarily at offsetting these departures from fully competitive price and wage relationships, their limited influence over inflation and the strains they would be confronted with should be viewed in perspective.

Aiming controls toward offsetting noncompetitive wage-price relationships by squeezing profit margins of firms exercising market power would compel explicit attention to the question of whether rates of return were adequate to support investment and maintenance of production capacity in the sectors affected. A one-time reduction in prices and rates of return of this kind would, of course, make no continuing contribution to reduced inflation.

Similarly, a policy aimed at reducing relative wages in some of the more highly organized high-wage sectors of the economy could be maintained only until the influence on relative wages of labor market power was offset, and there would be no further continuing

influence on the rate of inflation. Even if a realignment of relative wage positions could be achieved by use of controls, the forces that generated the prevailing patterns are undoubtedly strong and would pose a continuing threat of labor strife to re-establish the previous wage differentials.

Except for very short periods, the impact on prices of restricting the pass-through of increased costs and squeezing corporate profits is much smaller than seems to be generally recognized. Between the beginning of 1971 and the end of 1973, the cumulative rise in prices attributable to inflation within the corporate nonfinancial sector was 8.7 percent. If profit margins had been held to their low cyclical position at the beginning of the period, the rise in prices would have been reduced by less than one percentage point.

Incomes policies could also be developed that are not oriented toward restructuring broad relative price or wage relationships. These policies could be directed toward a roughly parallel reduction in inflation across all sectors. The controls of 1971–1974, for example, were initially designed to limit price adjustments throughout the economy to the magnitude of short-term cost increases and to influence the size of cost increases primarily by establishing a standard to reduce the size of wage increases. This was viewed as an approach that would help achieve an actual reduction in inflation during a period in which generalized excess demand was not an immediate threat. Revision of expectations and the development of contracts and practices reflecting lower rates of inflation were expected to exercise a stabilizing influence, similar in kind but opposite in direction to the influence that was attributed to the buildup of inflation in the late 1960s on price increases in 1970 and 1971.

Price developments in 1973, particularly the surge in food prices and the large increases in the prices of basic materials and petroleum later in the year, created a vastly different economic environment from what had been projected. These price developments should not necessarily be regarded as a challenge to the validity of the concepts on which the controls were initially based, nor should they necessarily be regarded as a demonstration of the inappropriateness of the limited purposes of the controls under the conditions that were projected in 1971. Instead, they serve as a reminder of the crucial importance for short-term price performance of market developments in a limited number of critical sectors, such as food and energy. More generally, they serve as a reminder of the flexibility of the price system as a mechanism for promoting rapid adjustments to change in the marketplace. The price surge that be-

gan in 1973 also indicated that, whatever contribution controls may have made during 1972, they could have little marginal influence under the conditions that emerged in 1973 unless control policy was shifted toward establishing rigid ceilings and supplementing the ceilings with subsidies and non-price-rationing mechanisms as necessary—which would of course have been a policy with an entirely different conceptual basis.

Controls may in some instances make a limited contribution toward facilitating adjustment to lower inflation when no large shifts in supply or demand are projected. Such a contribution could be made by altering public expectations of inflation, for example, if inflationary expectations are an important source of momentum in price and wage increases. Controls are vulnerable to serious failure, however, by neither containing inflation nor avoiding potentially costly inefficiency when major supply or demand shifts occur. The normal function of the market system, of course, is to generate automatic adjustments of prices and consumption to changes in market conditions—changes that are constantly occurring and usually not accurately foreseen. This raises the question of whether the costs that controls may impose before they can be gracefully terminated, or over time if continued indefinitely, may exceed the benefits of whatever limited contribution they may make.

NOTES

1. Paul W. McCracken, "The Game Plan for Economic Policy," *Proceedings of the American Statistical Association,* Business and Economics Section (New York, August 19–22, 1969), pp. 294–298.
2. See, for example, *Economic Report of the President, 1970,* February 1970, pp. 25–27.
3. The disappointing performance and the questions that it raised about reasons for the slow response are illustrated in *Economic Report of the President, 1971,* February 1971, p. 28 and p. 60ff.
4. See also Lloyd Ulman's discussion of this aspect of the politics of incomes policies in "Phase II in Context: Towards an Incomes Policy for Conservatives," in Walter Galenson, ed., *Incomes Policy: What Can We Learn From Europe?* (Ithaca, N.Y.: New York State School of Industrial and Labor Relations, Cornell University, 1973), p. 92.
5. Arnold R. Weber, *In Pursuit of Price Stability* (Washington, D.C.: Brookings, 1973), p. 6.
6. Committee for Economic Development, *Further Weapons against Inflation* (Washington, D.C., 1970).
7. Weber, *In Pursuit of Price Stability,* p. 5.
8. The most widely noted statement by Burns was the Pepperdine speech, "The

Basis for Lasting Prosperity" (address in the Pepperdine College Great Issues Series, Los Angeles, Calif., December 7, 1970).

9. *Economic Report of the President, 1971*, p. 82.
10. The extent to which the public dialogue on inflation had come to be focused on incomes policy and the defensive position in which this placed the administration is illustrated by a statement by Paul McCracken, chairman of the Council of Economic Advisers, that "we have now in effect many elements of what has come rather loosely to be called an incomes policy. We are now considering ways to make these elements more systematic and comprehensive, and to provide more adequately for their management" (Joint Economic Committee, *1971 Economic Report of the President*, 92d Cong., 1st sess., February 5, 9, 17, 18, and 19, 1971), p. 9.
11. For a detailed review of stabilization developments and policy in the period before the introduction of controls, see Phillip Cagan, Marten Estey, William Fellner, Charles E. McLure, Jr., and Thomas Gale Moore, *Economic Policy and Inflation in the Sixties* (Washington, D.C.: American Enterprise Institute, 1972). For examples of discussions raising questions about changes in the response of real output growth and inflation to aggregate demand changes, see Robert J. Gordon, "Inflation in Recession and Recovery," *Brookings Papers on Economic Activity*, no. 1 (1971): 105–158, and the following papers in *Brookings Papers on Economic Activity*, no. 2 (1971): 452–510; Charles L. Schultze, "Has the Phillips Curve Shifted? Some Additional Evidence"; William Fellner, "Phillips-type Approach or Acceleration?"; Arthur Okun, "The Mirage of Steady Inflation"; and Robert J. Gordon, "Steady Anticipated Inflation: Mirage or Oasis?"
12. For a more detailed discussion of the wage-structure developments discussed in this section, see Marvin Kosters, Kenneth Fedor, and Albert Eckstein, "Collective Bargaining and the Wage Structure," *Labor Law Journal*, August 1973, pp. 517–525.
13. This analysis is an application of wage-structure concepts to the particular inflationary conditions of the late 1960s and early 1970s. Wage-structure concepts have been applied in many studies of wage determination under collective bargaining, with concepts in this closely related body of ideas called "wage contours" (Dunlop), "orbits of coercive comparison" (Ross), "wage constellations" (Harbison), and "neighboring strategic wage rates" (Bronfenbrenner and Holzman). See Martin Bronfenbrenner and Franklyn D. Holzman, "Survey of Inflation Theory," *American Economic Review*, September 1963, p. 618.
14. In discussing labor cost, productivity, and price prospects at a Cornell University conference held in April 1972, Lloyd Ulman recognized that these conditions were favorable for an apparently successful incomes policy: "Thus, the policy of restraint could be effective or appear to be effective (if the stimulus to expansion came from other quarters), even if it did not succeed in its conventional task of restraining wage settlements directly. This could be regarded as the Indian Rope Trick Theory of incomes policy" (Ulman, "Phase II in Context," p. 91).
15. This study includes little discussion of Phase I, the wage-price freeze of 1971, which is the subject of a careful study by Weber, *In Pursuit of Price Stability*, cited earlier. Weber was director of the Cost of Living Council during the freeze and served as a public member of the Pay Board during Phase II.

    A very brief and lucid sketch of the stabilization program is contained in John T. Dunlop, "Inflation and Incomes Policies: The Political Economy of

Recent U.S. Experience," *Eighth Monash Economics Lecture* (Monash University, Australia, October 1974).

16. The director of the Cost of Living Council was Donald Rumsfeld, who was also counselor to the President. The council chairman was the secretary of the treasury, initially John B. Connally and beginning in the second quarter of 1972, George P. Shultz. In addition to the Pay Board and Price Commission, the Construction Industry Stabilization Committee was continued as an operating unit and the Committee on Interest and Dividends was established. In addition, three advisory committees were created: the Health Services Industry Committee, the Committee on State and Local Government Cooperation, and the Rent Advisory Board.
17. The guideposts outlined in the 1962 *Economic Report of the President* were put forward as a contribution to public discussion, and the impact on public attitudes of widespread discussion of the concept may be illustrated by the opening sentence of the policy statement adopted by the Pay Board on November 8, 1971, establishing the general standard: "Millions of workers in the Nation are looking to the Pay Board for guidance with respect to permissible changes in wages. . . ." It may also be illustrated by the reaction of the press to the statement of the Labor-Management Advisory Committee of February 26, 1973, stating that "no single standard or wage settlement can be equally applicable at one time to all parties in an economy so large, decentralized and dynamic." See, for example, "The Magic Number Is a Blur," New York *Times*, March 4, 1973; and Edward Cowan, "Hocus-Pocus on Wage Guidelines," *Times*, March 11, 1973.
18. Later in 1972, in response to an amendment to the Economic Stabilization Act, provision was made for larger than previously permitted pay increases to reflect introduction of improvements in "qualified fringe benefits," mainly pensions. The coal settlement, the first case reviewed by the Pay Board, included a large increase in labor costs that was necessary to assure the solvency of the pension fund. It provides an example of how wage issues are complicated by circumstances unique to the situation under review.
19. For a perceptive discussion of problems in the administration of wage controls and the emphasis that was placed on a general standard with few exceptions, see Arnold R. Weber, "Making Wage Controls Work," *The Public Interest*, Winter 1973, pp. 28–40.
20. The chairman of the Pay Board was George H. Boldt, and the board was initially composed of fifteen members—five each representing the general public, business, and labor.
21. The chairman of the Price Commission, composed of seven public members, was C. Jackson Grayson.
22. See, for example, the President's address announcing the freeze, and "Background for the Post-freeze Economic Stabilization Program," Cost of Living Council, October 7, 1971.
23. See Don R. Conlan, "1973 U.S. Economic Outlook," New York *Times*, September 3, 1972, and the editorial, "Phase III Controls: Too Vague, Too Narrow, Too Weak," in *Business Week*, March 10, 1973, in which labor leaders were said to be "openly scornful of the idea that wage increases can be held to the 5.5 percent guideline of Phase II."
24. John T. Dunlop became the director of the Cost of Living Council when Phase III was introduced. He had been chairman of the Construction Industry Stabilization Committee since its inception.

25. Statement of the Labor-Management Advisory Committee, February 26, 1973; reprinted in Senate Subcommittee on Production and Stabilization of the Committee on Banking, Housing, and Urban Affairs, "Statement of Dr. John T. Dunlop," *Hearings: Oversight on Economic Stabilization*, 93d Cong., 2d sess., January 30 and 31 and February 1 and 6, 1974, p. A-67. Dunlop's entire statement was reprinted in Cost of Living Council, *Economic Stabilization Program Quarterly Report* for January 1–May 1, 1974 (1974), pp. 129–381.
26. Tripartite committees were established to review wage adjustments in the food industry and the health services sector where self-administration was not permitted.
27. See Senate Subcommittee on Production and Stabilization, "Statement of Dr. John T. Dunlop," App. A, in which a large number of inflation projections for 1973 are tabulated. The actual rise in the GNP deflator was over 5 percent while most projections were between 3 and 4 percent. The difference between the actual and projected rise in consumer prices was even larger because food prices rose much more rapidly than most other prices, and food accounts for a larger share of the consumer price index than of the GNP deflator.
28. For an expression of the administration's view of the wage outlook, see the statement of George P. Shultz, secretary of the treasury and chairman of the Cost of Living Council, in Senate Committee on Banking, Housing, and Urban Affairs, *Hearings on S. 398: A Bill to Extend and Amend the Economic Stabilization Act of 1970*, 93d Cong., 1st sess., January 29, 1973, pp. 11–12.
29. See Marvin H. Kosters, *Controls and Inflation: The Economic Stabilization Program in Retrospect* (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1975), pp. 73–75, for a discussion of the influence of the June 1973 freeze on the food sector.
30. Commitments of some form were made in connection with decontrol for a total of eighteen industry sectors. See *Economic Stabilization Program Quarterly Report* for January 1, 1974–May 1, 1974, Chap. 2; and "Removing Controls: The Policy of Selective Decontrol," in Office of Economic Stabilization, *Historical Working Papers on the Economic Stabilization Program*, Part 2 (Washington, D.C.: U.S. Government Printing Office, 1974), pp. 859–948.
31. See John T. Dunlop, "Toward a Less Inflationary Society" (remarks to the Society of American Business Writers, San Francisco, May 6, 1974), in *Economic Stabilization Program Quarterly Report* for January 1, 1974–May 1, 1974, pp. 599–607, for a discussion of areas in which federal government initiatives could make a contribution toward reducing inflation.
32. See, for example, Robert J. Gordon, "The Response of Wages and Prices to the First Two Years of Controls," *Brookings Papers on Economic Activity*, no. 3 (1973):765–778; and William D. Nordhaus, "The Falling Share of Profits," *Brookings Papers on Economic Activity*, no. 1 (1974):169–208. See also Daniel J. B. Mitchell, "Phase II Wage Controls," *Industrial and Labor Relations Review*, April 1974, pp. 353–375; Michael Wachter, "Phase II, Cost-Push Inflation and Relative Wages," *American Economic Review*, June 1974, pp. 482–491; Edgar Feige and Douglas Pearce, "The Wage-Price Control Experiment—Did It Work?" *Challenge*, July-August 1973, pp. 40–44.
33. See, for example, Milton Friedman's discussion of this question in his *Newsweek* column of November 8, 1971; reprinted in Milton Friedman, *An Economist's Protest* (Glen Ridge, N.J.: Thomas Horton, 1972), pp. 20–22.
34. An estimate of the impact on construction wage increases of the Construction Industry Stabilization Committee was developed by D. Q. Mills in "Explaining

Pay Increases in Construction: 1953–1972," *Industrial Relations*, May 1974, pp. 196–201. His estimate of a 2.5 percent annual effect in reducing construction wage increases is, as he notes, sensitive to the treatment of the significant influence of a wage-structure variable incorporated into his analysis.

35. This argument is noted, for example, in Robert M. Solow, "The Case against the Case against the Guideposts," in George P. Shultz and Robert Z. Aliber, eds., *Guidelines, Informal Controls, and the Marketplace* (Chicago: University of Chicago Press, 1966), p. 45; and Edward Cowan, "U.S. Aide Outlines Tactics on Wages," New York *Times*, March 1, 1973.
36. See Kosters, *Controls and Inflation*, for a discussion of selected sectors in which large increases in prices were concentrated.
37. For an analysis of term-limit pricing agreements, see Frederic L. Laughlin, "An Evaluation of the Price Commission's Policy of Term Limit Pricing during Phase II of the Economic Stabilization Program" (Ph.D. diss., George Washington University, 1975).
38. Means (M) and standard deviations (σ) for the difference between year-to-year changes in prices and unit labor costs were as follows:

	Private Nonfarm		Nonfinancial Corporations	
M	(1950–1973)	−0.11	(1959–1973)	−0.06
σ	(1950–1973)	2.47	(1959–1973)	2.45
σ	(1971IV–1973IV)	0.69	(1971IV–1973IV)	0.82

39. The basic data for the regressions are:

	Constant	Percent Change in Real Output	Unemployment Rate	Standard Error of Estimate
Private nonfarm sector				
($N = 90$; $R^2 = 0.57$)	−5.4	.28	0.89	1.08
Stand. error		(.03)	(0.10)	
Nonfinancial corps.				
($N = 51$; $R^2 = 0.74$)	−6.5	.30	1.01	0.88
Stand. error		(.03)	(0.12)	

Serial correlation was high: the Durbin-Watson statistic was 0.5 for each regression.

40. It was pointed out by Joel Popkin in "Prices in 1972: An Analysis of Changes during Phase II," *Monthly Labor Review*, February 1973, pp. 16–23, that prices of finished goods seemed to have risen by more at the manufacturing level than at the retail level during 1972.
41. Lack of compliance was usually implied, though not explicitly alleged, in calls for stricter controls or a return to controls similar to those of Phase II. New York *Times* editorials calling for stricter controls appeared on average more than twice a month between February and June 1973, usually immediately after wholesale and consumer price increases were announced. The *Business Week* editorial of March 10, 1973, called for a shift from "voluntary" to mandatory rules, better enforcement, and farm product price ceilings. Gardner Ackley in "And Now Phase Four" (*Dun's*, August 1973, p. 11) said that Phase III had "allowed large numbers of firms in many leading industries to violate the profit margin limitations."

42. A preliminary review of reports covering the first four months of 1973 showed only three firms out of nearly 500 without adequate cost increases to support the increased revenues they had received from price increases. An internal analysis of eight industry sectors also showed price increases averaging significantly less than accumulated cost increases, both during the first four months of the year and by June, when the freeze was imposed. By July 12, over 900 reports on costs and profits had been received from firms with annual sales of over $250 million. According to nearly 500 reports from nonfood firms that had been reviewed, price increases averaged less than 1.5 percent above levels authorized when Phase III began for about 450 firms, and only 6 firms that had increased prices by more than 1.5 percent had profit margins exceeding base-period levels. In the food sector only 7 out of almost 150 firms showed profit margins exceeding base-period levels.
43. For example, sugar and certain other food product prices were differentially affected by technical details of the regulations, and modifications in the regulations or exceptions for particular firms were made to alleviate these situations. The influence of controls on lumber markets during Phase II is discussed in Kosters, *Controls and Inflation,* pp. 79–81.
44. During the first week of Phase II, for example, rising cattle prices, with the largest meat-packing firms subject to prenotification and a delay of up to thirty days for price increases, showed the need for special provisions for inputs with volatile prices in order to avoid market disruption and markedly different treatment of large and small firms.
45. In that case, as in many others, the matter was brought to the attention of the Cost of Living Council informally, and it was dealt with without the need for formal action.
46. An extensive discussion of the relationship between farm product prices and food prices, the influence of controls on processing and distribution margins, and the influence of meat price ceilings on prices and supplies is contained in Kosters, *Controls and Inflation,* pp. 61–78.
47. See, for example, Sidney Fish, "Controls Spur Exports of Scarce Commodities," *Journal of Commerce,* December 14, 1973, p. 1.
48. Such instances were frequently reported on the basis of surveys by the National Association of Purchasing Managers and in trade publications and newspapers. Some instances in sectors such as petrochemicals and plastics and nonferrous metals are discussed in Cost of Living Council, *Economic Stabilization Program Quarterly Report* for October 1, 1973–December 31, 1973, Chap. 2 (pp. 5–34). See also Herbert Koshetz, "Black Market in Textile Yarns Is Seen," New York *Times,* January 15, 1974, p. 49.
49. The case of paper is listed among the "proven" distortions in Senate Subcommittee on Production and Stabilization, "Statement of John T. Dunlop," App. Q, p. A-114.
50. Shortages were widely reported in trade publications and in the news media in late 1973 and early 1974. Widespread concern about the incidence and causes of shortages led to three major surveys in late 1973 by the National Association of Purchasing Managers, the National Association of Manufacturers, and the National Association of Business Economists. Long lists of materials in short supply were reported by each, and shortages and black markets were frequently attributed to the controls. See also "Managing in a Shortage Economy," *Business Week,* November 10, 1973, p. 150; and "More and More Scarcities: Who Is Feeling the Pinch," *U.S. News & World Report,* September 3, 1973, p. 15.

51. These practices were reported by construction contractors, who frequently preferred higher prices to shortages. See, for example, "Builders Warn: No Rebars, No Building," *Business Week*, December 8, 1973, p. 37; and Michael K. Drapkin, "Steel Concrete-Reinforcing Bar Shortage May Severely Hurt Nonresidential Building," *Wall Street Journal*, January 21, 1974, p. 24.
52. The behavior of inventories is emphasized in Richard B. Mancke's analysis of the influence of petroleum price controls in *Performance of the Federal Energy Office* (Washington, D.C.: American Enterprise Institute, 1975).
53. Changes in the spread between prices on domestic and world markets between January 1, 1973, and November 30, 1973, for aluminum, copper, lead, and zinc are shown in *Economic Stabilization Program Quarterly Report*, for October 1–December 31, 1973, p. 31.
54. For discussions of specific instances of shortages and inefficiency that were attributed to controls in a wide range of industry sectors, see the statements and testimony of representatives from the private sector in *Hearings: Oversight on Economic Stabilization* (see note 25, above) and Senate Subcommittee on Production and Stabilization of the Committee on Banking, Housing, and Urban Affairs, *Hearings: Economic Stabilization Act of 1974* 93d Cong., 2d sess., February 19 and 21 and March 6, 1974).
55. A brief discussion of price controls in the steel industry and a summary of actions that were taken to modify the regulations is contained in Appendix V of "Removing Controls: The Policy of Selective Decontrol," *Historical Working Papers on the Economic Stabilization Program*, August 15, 1971, to April 30, 1974, Part 2, pp. 942–947.
56. In his foreword to Kosters, *Controls and Inflation*, George P. Shultz observes that "the frequently heard argument that 'needed' fiscal and monetary stimulation will be possible if there is an 'adequate incomes policy' is proof enough of the most pernicious aspect of controls."
57. *Economic Report of the President, 1972*, p. 69, pp. 101–102.
58. *Economic Report of the President, 1973*, p. 53 and *ibid., 1972*, p. 96.
59. *Ibid., 1974*, p. 31.
60. *Ibid., 1972*, p. 71.
61. "Statement of Dr. John T. Dunlop" (see note 25, above), p. A-1.
62. Such initiatives were facilitated by the fact that the director of the Cost of Living Council at that time also served as chairman of the Productivity Commission.
63. See "Removing Controls: The Policy of Selective Decontrol" in *Historical Working Papers on the Economic Stabilization Program*, Part 2, pp. 859–948, for a detailed discussion of the decontrol process.
64. Some evidence of a possible small favorable influence on investment during the controls period is contained in Roland G. Droitsch, "The Impact of the Economic Stabilization Program on Business Fixed Investment," *Historical Working Papers on the Economic Stabilization Program*, Part 2, pp. 949–988.
65. Most of the significant legislative initiatives in Congress before mid-1973 were intended to tighten controls. After mid-1973 most were intended to relieve the pinch of controls; many bills and resolutions to end controls were introduced, and several resolutions or bills were introduced to provide relief from controls in sectors such as food, fertilizer, petrochemicals and steel. See the listing of legislative activities from May 1, 1973, to April 30, 1974 in "Congress and Controls," *Historical Working Papers on the Economic Stabilization Program*, Part 1, pp. 220–243.
66. *Economic Report of the President, 1962*, p. 185.

COMMENTS

R. A. Gordon
University of California at Berkeley

This paper provides a broad and at the same time rather detailed survey of the American experience with wage and price controls during 1971–1974. Several pages of Introduction and Background are taken up in laying the groundwork, reviewing the behavior of aggregate demand, wages, and prices during 1965–1971, and offering some suggestions as to why the accelerating inflation in wages and prices was slow to respond to the deflationary forces that brought on the recession of 1970. This introductory discussion is concluded with the suggestion that there is some reason to believe that by mid-1971 the rate of increase in unit labor costs was beginning to taper off, with the probability of both a deceleration in the rate of price increases and improved profits. The inference, presumably, is that the freeze and subsequent detailed control of wages and prices were not necessary.

A description of the controls through the successive phases then follows, after which Kosters proceeds to consider the effects of the program on the general performance of the economy and on the behavior of wages and prices. The suggestion is offered that "delays in price increases induced by the controls" contributed to an overly expansionary monetary policy in 1972 and the early months of 1973. No supporting evidence for this proposition is offered.

The discussion of the effect of controls on wages does not dig very deeply. The chief emphasis is on the fact that by 1972 the wage structure had come into reasonable balance. Union wages governed by long-term contracts, which had been lagging behind at the end of the 1960s, had finally caught up, and thus the upward pressure on wages was easing, apart from any effect of the controls. In the construction industry, however, wage controls clearly did have a significant influence.

The discussion of the impact of controls on prices does not probe very deeply. One interesting point made is that at the beginning of 1972 there was considerable leeway for industrial prices to rise under the rules initially established, apart from the additional leeway for price increases later granted by the Price Commission. The author also considers the extent to which the relation between price changes and changes in unit labor costs was affected by price

controls. The conclusion reached is that "price increases conformed more closely to unit labor cost increases under the cost pass-through rules of the controls than would have been expected at that stage of the cycle." This conclusion is based on rather slender evidence, although other evidence that could be developed might well support it.

Interestingly, in this section of the paper, the author pays more attention to the effect of the controls on profits than he does to their effect on prices and, particularly, on wages. The general conclusion is that rising profits and widening profit margins added relatively little to the rate at which prices were increasing. Percent profit margins did widen somewhat during Phase II, but most of this resulted from increases in man-hour productivity associated with rising output during a cyclical upswing. And profit margins were relatively low when controls were imposed. A further conclusion of this part of the analysis is that the use of percent rather than constant dollar markups during phases II and III added relatively little—not much more than 10 percent—to the rate of inflation.

I shall devote the rest of my comments to the author's "Concluding Discussion." The title of this last section is accurate. It is a "Concluding Discussion," not a clear-cut set of conclusions derived from the data and analysis of the preceding sections. Four broad topics are discussed: (a) the effect of the controls on the management of monetary and fiscal policy, (b) the possibility of developing alternatives to mandatory controls, (c) the influence of public pressures to "do something" about inflation, and (d) the limitations of controls. The discussion is couched in fairly broad terms, and, for the most part, these concluding observations do not depend directly on the detailed empirical presentation in the main part of the paper. I must confess that I found this concluding section not very satisfactory. The presentation is sometimes imprecise; the documentation provided is almost entirely from official sources; and other relevant research is largely ignored.

The paper has relatively little to say about the extent to which the controls might have led to an overly expansionist monetary and fiscal policy in 1972–1973 and thereby contributed to the accelerating inflation in 1973–1974. Indeed, one can hardly begin such a discussion without separating out the relative importance of generalized demand-pull and cost-push forces and of special supply shortages, something which the author does not attempt. One can agree with him, however, that a major problem at the beginning of 1973 was the failure of government and private forecasters to pre-

dict the sharp acceleration in prices that was then starting up. This leaves a critical question to which the author does not address himself. If the forecasts had been more accurate, what government actions should then have followed? Tighter monetary and fiscal policy, possibly bringing on a recession earlier than the one that we are now experiencing? Or a decision to stick with Phase II and not move on to the more relaxed controls of Phase III? And/or to take more vigorous action to deal with the specialized shortages that were developing? Or what? An attempt to answer these questions would have extended the paper considerably.

Kosters then goes on to consider possible alternatives to mandatory controls when the public pressure for government action against inflation requires that something be done. Can we develop, in his words, "imaginative policies that would help to identify and attack the real economic problems of our society" and would permit us to avoid the costs of controls—controls which will in any event be certain to disappoint public expectations. Having asked this challenging question, Koster has little to propose except some set of institutional arrangements "for identifying and bringing together spokesmen representing various interests and involving them in the process of working toward solutions. . . ." Some consideration is also given to what the government might do to stimulate investment, particularly in shortage areas; to the effect of controls on investment in 1972–1973 (apparently not very serious); and to the failure of both business and government to predict the capacity shortages that developed in 1973.

After some general observations on the role of public opinion in pushing the government into controls, Kosters concludes with some final observations on the limitations of controls. Among the points made, the following might be mentioned. Holding down profits in oligopolistic industries would have made a trivial contribution to the fight against inflation. Something more might have been gained by reducing relative wages in the more highly organized sectors of the labor market, but the obstacles here are almost insurmountable. Under the circumstances that prevailed in 1973, the Phase II type of controls could not work. By then, for controls to be effective even for a short period, we should have had to move to rigid ceilings supplemented by rationing and subsidies. And, of course, that was never in the cards.

And Kosters ends by asking once again whether wage and price controls in peacetime do not entail costs significantly greater than the benefits they presumably bring. The question is asked in the

final sentence but not explicitly answered. But it is fairly clear what he believes is the correct answer.

So much for a summary of the paper. As the former associate director of the Cost of Living Council, Kosters is obviously extremely well informed, and the paper is replete with useful—if sometimes overly detailed—information. Kosters carries out his promise to provide an "overview" of the background and operation of the controls. But this "overview" also takes in a good deal of familiar scenery. In general, there is too much detail, and to some extent too close exposure to the trees obscures the view of the forest.

The presentation is not as analytical as it might be. The quantitative analysis, so far as it goes, does not penetrate very far; sophisticated regression analysis is largely eschewed; and there are surprisingly few references to the work of others who have sought to evaluate the effectiveness of the controls—including some who are at this conference. It might also have been useful to have had some evaluation of the relative extent to which the controls operated to restrain wage increases, on the one hand, and price increases, on the other. Is it true, as has been argued, for example, that the chief effect on wages came through the effect on prices?

On the whole, Kosters is correct in arguing that the sharp acceleration in price increases in 1973 owed little to the relaxation of controls in Phase III. But I think there is evidence that in some industries the relaxation of controls did make an observable difference. The overall impact, however, was not large compared to the push coming from food and raw materials.