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Simultaneous Inflation and Unemployment: A Challenge to Theory and Policy

Author(s): GARDINER C. MEANS

Source: *Challenge*, SEPTEMBER/OCTOBER 1975, Vol. 18, No. 4 (SEPTEMBER/OCTOBER 1975), pp. 6-20

Published by: Taylor & Francis, Ltd.

Stable URL: <https://www.jstor.org/stable/40719312>

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Simultaneous Inflation and Unemployment: A Challenge to Theory and Policy

There are five types of inflation. In order to adopt the right policy at the right time, it is well to know which is which.

Inflation is an age-old problem. So is underemployment, though it seems to have become more acute in the twentieth century. But simultaneous inflation and excessive unemployment is something relatively new.

According to traditional theory, simultaneous inflation and underemployment are not possible. Inflation can occur if an excess in aggregate demand develops. Deflation can occur if a deficiency of aggregate demand develops, and experience indicates that deflation can result in excessive unemployment. But the received theory provides no possible explanation of a general rise of prices in the presence of excessive unemployment.

Yet in recent history, many examples can be found of inflation which has occurred in the presence of

heavy unemployment of both men and machines. In the United States, both wholesale and consumer prices have nearly doubled in the last twenty years, but in only two of those years, 1967 and 1968, has there been an excess in overall demand, and these two years accounted for less than 4% of the total price rise. For most of the period, there was a deficiency in demand, while unemployment averaged 5% of the civilian labor force. Clearly, experience is in conflict with traditional theory, and new theory is required.

This article is concerned with the new inflation as it has arisen in the United States and the issues of theory and policy it raises. To understand this new phenomenon, it is necessary to distinguish among five types of inflation, three to be found in the classi-

GARDINER C. MEANS has most recently served as the Associate Director of Research on the Committee for Economic Development. Among his many books is *Pricing Power and the Public Interest*. This article originally appeared in *The Roots of Inflation: The International Crisis*, © 1975 Burt Franklin & Co.

cal literature and two nonclassical types.

Classical types of inflation

The classical theorists have recognized and taken into account three types of inflation: (1) demand inflation arising from an excessive increase in aggregate demand; (2) price increases due to crop failures or a comparable shrinkage in supply; and (3) a rise in the domestic prices of both imports and exports due to monetary devaluation or foreign inflation. None of these could explain simultaneous inflation and excessive unemployment. But it is necessary to understand each in order to distinguish them from the nonclassical types of inflation.

Classical demand inflation. Most important in the classical literature is the familiar inflation which arises from excessive demand. In popular terms, it comes from too much money chasing too few goods. Technically, it occurs when there is already full employment and aggregate demand expands beyond the output which can be supplied at full employment. Then prices and wage rates rise more or less together.

This is the type of inflation discussed in the traditional textbooks under the heading of inflation. It is properly called "demand inflation." It occurred in the United States both during World War I and following World War II. If this classical demand inflation were the only type of inflation, traditional theory would be correct in holding that simultaneous inflation and excessive unemployment are incompatible.

Supply shortages. The second source of price rises accounted for by classical theory, supply shortages such as crop failures, does not alter this classical conclusion. Bad harvests could raise not only farm prices but, to a lesser degree, other prices as well since living costs are reflected in the price of labor. The same could be expected from a temporary cutoff of crude oil supplies. In both cases, the price rise would not only be temporary but, according to classical theory, the market would continue to absorb all that could be produced consistently with the classical condition that marginal cost and marginal revenue are equated by price. Unemployment would not be involved in this type of inflation.

Foreign trade. The third type of classical inflation, that originating in foreign trade, would likewise not involve unemployment. Inflation abroad would raise the prices of a home country's imports directly, while the prices of domestic exports would, in turn, rise as

foreign countries bought more from the home country since domestic prices would be lower in terms of "their" (foreign) currency. This rise in the prices of goods in foreign trade could result in a rise in other prices as well, partly as imports entered as raw materials in the production and costs of domestic goods, and partly as they affected living costs and the price of labor. Essentially the same result could be expected for a country which devalued its currency. But in neither case would the postulates of classical theory allow the result of the price rise to be the creation of unemployment. The two would be incompatible.

The basis of traditional theory. The classical incompatibility between inflation and unemployment rests on the postulate of price and wage flexibility, with prices moving in the same direction as demand. Traditional theory assumed that prices and wages were highly flexible, constantly adjusting to equate supply and demand. The haggling and bargaining in the marketplace was expected to clear the market just as, in the wheat market or a stock exchange, the bids and offers are matched and the price adjusts. All who are willing to sell at the current market price sell all they want to, and all who are willing to buy at the current market price buy all they want to, thus clearing the market. Whether markets were formally organized or not, prices were expected to respond quickly to changes in aggregate demand, falling with a decrease in demand and rising with an increase. Even monopoly prices were expected to be flexible as the monopolist constantly adjusted his price to equate "marginal cost" and "marginal revenue." Any inflexibility was treated as a "friction" and not taken into account in the theoretical models on which traditional theory based its policy conclusions. Prices which behaved in this classical fashion can properly be called "classical market prices" or more simply "market prices." If the great bulk of market transactions took place at such flexible market prices, general inflation and general unemployment would be incompatible.

Nonclassical price behavior

When actual transactions in the modern world are examined, it is found that prices (other than those of farm products and some raw materials) are seldom highly flexible and that supply and demand in the traditional sense are seldom equated by price.

For most goods, the price has been set, usually by the seller, and kept constant for a period of time and a series of transactions. At the price set, more is likely to be offered than is currently demanded, and the seller would usually be delighted to sell more at the same price. Sometimes demand exceeds supply, and some form of rationing occurs other than through a change in price. Only by chance are supply and demand equated and the market just cleared by the price which has been set. Such a price has been called an "administered price"—and is the type of price at which the great bulk of commodity and service transactions take place in a modern industrial society.

Market vs. administered prices. The contrast between "market" and "administered" prices is clear in the field of retailing. Haggling and bargaining is still the standard procedure for arriving at prices in oriental bazaars. But prices in a modern chain store are set by the store management and kept constant for a series of transactions. Sometimes a given item will be offered at the same price for weeks or months at a time. In a well stocked store, supply is usually in excess of demand, with stock immediately available to fill whatever demand arises at the fixed price. Occasionally demand exceeds supply, and a customer is told, "Sorry, we are all out of that item. Come back next week." Even the oriental bazaars have been turning to price administration. A Turkish shop selling at administered prices is likely to post a sign "Prices à la Franca."

Most industrial prices are administered prices, not classical market prices. The bulk of such prices are set by the administrative action of the seller. In the steel industry, prices are not only set for periods of time, but for such long periods that a price change often becomes front page news. Many prices are set in open-ended contracts negotiated between buyers and sellers for a year or more at a time, with the actual purchase transactions not occurring until the buyer decides how much to buy from time to time at the agreed-upon price. This procedure has also become traditional for wage rates, with the "price" set either by the employer or by an open-ended contract negotiated between management and labor. The actual amount of labor employed is then usually determined by the requirements of the employer.

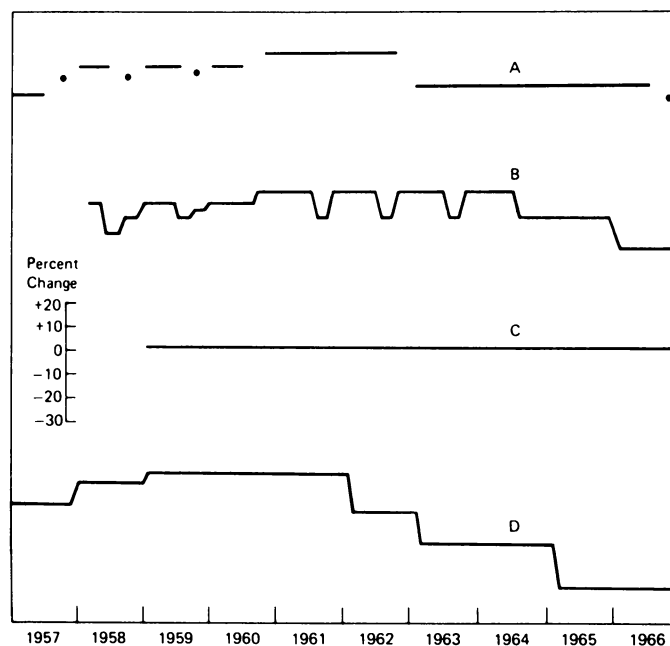
The relative inflexibility of industrial prices. Studies of actual behavior of industrial prices show great inflexibility of prices. A study concerned with the Great Depression of the 1930s shows that for a fifth of the

weight in the wholesale price index of the U.S. Bureau of Labor Statistics, the average frequency of price change reported by individual sellers was once every two years. For another fifth, individual sellers reported on the average only one change every eight months. A recent study by the National Bureau of Economic Research indicates that for a sample of twenty-seven important industrial products, the price paid by an individual buyer reporting in each month over a four-year period changed on average less frequently than once every seven months.

The only concrete examples of this infrequency of price changes given in the National Bureau study are contained in a chart for bulk ammonia which is reproduced below. The series in the chart were chosen in the Bureau study "to display the varieties of price data reported: unchanging prices, irregularly changing prices, broken price series, and frequently changing prices," and ammonia is referred to as ". . . our illustrative commodity. . . ." The chart gives the wholesale price paid by each of four substantial bulk buyers of ammonia who reported the prices actually paid in successive months in the period 1957 to 1966.

Examination of Chart 1 shows a high degree of inflexibility. Buyer C reported that it paid *exactly* the same price each month for eight years. Buyer A, though it did not buy in every month, paid only four different prices in a ten-year period. Buyer D re-

Chart 1 Ammonia: Selected Individual Price Series



ported only five price changes in ten years. And Buyer B reported fifteen changes in nine years, but many of these were temporary seasonal changes. If one leaves out the seasonal changes, the four series show eleven changes in a combined life of thirty-six years, or an average change of once every three and a quarter years.

The chart also shows that when the prices did change, the change came in quantum jumps. The three changes reported by Buyer A averaged 8%. For Buyer D, the average change was 9%. For Buyer B, even including the seasonal changes, the average change was 6%.

These National Bureau data collected from buyers reinforce the evidence collected by the Bureau of Labor Statistics from sellers that for many industrial products, prices are administered and held constant for very considerable periods of time; and that when changes are made, they take quantum jumps.

Clearly the behavior of administered prices does not fit the expectation of traditional theory. It is not credible that for a seller of a given product, marginal cost and marginal revenue are constant for a matter of months at a time and then, suddenly, change so that a price 8% higher or lower is the price which just clears the market by equating marginal cost and marginal revenue. It would be even less creditable that marginal revenue and marginal cost both changed over a prolonged period in such a fashion that the price at which they were equal was constant and then, suddenly, was 8% higher or lower. Such price behavior implies not only significant market power in the determination of prices but also the use of pricing discretion in ways not expected from traditional theory. And most important here, it gives rise to two types of inflation, one which occurs when there is less than full employment, and the other, which can occur whether or not there is full employment—neither of which is consistent with the received theory.

The reflation of prices

The first of these nonclassical types of inflation grows out of the quite different reactions of market prices and administered prices to business fluctuations.

In a recession, the general drop in demand produces a fall in market prices, although production tends to remain level, as classical theory would lead one to expect. At the other extreme, administered

prices tend to drop little, while the fall in demand for such products works itself out in reduced sales, production, and employment. Other administered prices behave in an intermediate fashion, particularly those in which flexible, market-priced commodities constitute an important raw material. In such intermediate cases, both prices and production tend to drop to an intermediate degree. Thus, excessive unemployment develops along with reduced production in those sectors with relatively inflexible administered prices, while the classical reduction in market-determined prices comes mostly from competition. The net result is not only excessive unemployment, but also a severe imbalance in price relationships.

In a recovery from depression, the rise in demand operates primarily to lift employment where prices are inflexible, to lift flexible-market prices without much change in supply, and to lift both prices and production to an intermediate degree for the intermediate items. Because the rise in prices is a natural and necessary part of the process of recovery, it is “a good thing” and deserves a separate name. Here it will be called *reflation*.

A spectacular case of deflation and reflation occurred in the United States during the Great Depression of the 1930s. Chart 2 shows the behavior of five price indexes during the depression for products at wholesale which differ in the frequency of price change and therefore tend to reflect differences in the extent to which market power and administrative discretion are exercised over price. The chart shows the movement of the five indexes from the relatively full-employment years 1926 to 1929 as well as the depression and recovery years from 1929 to early 1942 when full employment was again achieved and the price-wage structure was frozen under wartime controls.

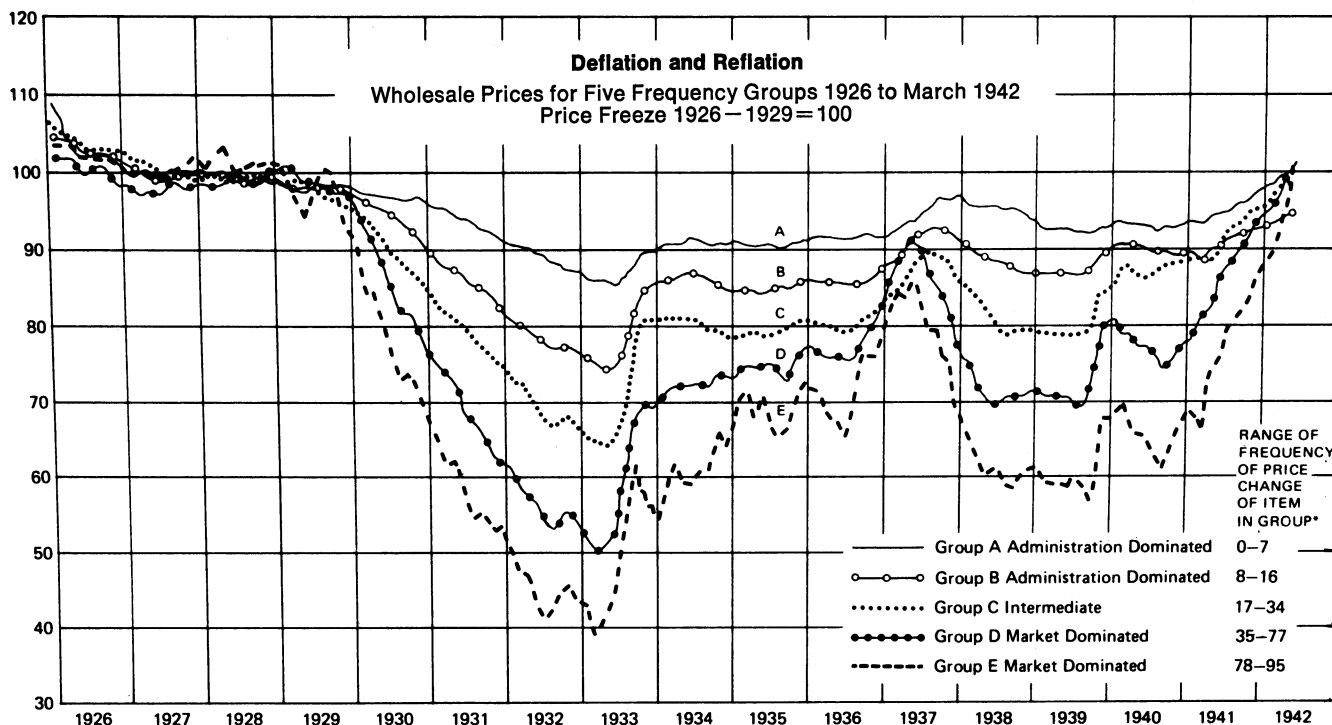
As can be seen from Chart 2, the market-dominated index E, made up of such items as wheat, beef cattle, hides, lead, zinc, lumber, and scrap steel, fell over 60% and recovered an equal amount so that at the time of the price freeze in 1942, it was back to approximately the level of 1929.

Index A, the most administration-dominated, comprising such items as agricultural implements, iron ore, hand tools, plate glass, and sewing machines, fell less than 10% and recovered by about nearly the same amount.

The intermediate indexes behaved in an intermediate fashion.

Chart 2

INDEX



*Price indexes are for 731 items included in the B.L.S. wholesale price index grouped according to frequency of price change in the months of the period 1926-33.

As a result, the five indexes which had diverged during the recession came somewhat together in the partial recovery of early 1937, diverged again in the 1937-38 recession, and came together again by early 1942 when prices were frozen under the war powers. As can be seen, the five indexes bore nearly the same relation to each other at full employment in 1942 as at full employment in 1929.

During this period, the fall in production and employment and the recovery of both occurred primarily in the industries whose prices had dropped least in recession and recovered least during reflation. This can be seen in Table 1, which gives the drop in the prices and production for each of ten major industries from 1929 to 1932 and their recovery to 1937.

Thus, the rise in aggregate demand during recovery lifted the sensitive market prices and increased employment where prices were least sensitive, thereby restoring the pre-depression price balance and full employment.

This same differential behavior of prices occurred in the recession and recovery of 1957-58 and in that of 1960-61 according to the new price data collected by the National Bureau of Economic Research from buyers of products. There was this significant differ-

ence, however: in the National Bureau sample, a substantial number of administered prices not only did not go down in recession, but actually went up, while a substantial number went down during recovery.

This nonclassical type of inflation would not be

Table 1

Price and Production Behavior in Recession and Partial Recovery

	Decline 1929-32		Rise 1932-37	
	Prices	Production	Prices	Production
Motor vehicles	12	74	2	64
Agricultural implements	14	84	9	84
Iron and steel	16	76	20	67
Cement	16	55	20	24
Automobile tires	25	42	27	24
Leather & leather products	33	18	29	27
Petroleum products	36	17	21	37
Textile products	39	28	24	24
Food products	39	10	24	-1
Agricultural commodities	54	1	36	8

Source: *The Structure of the American Economy*, National Resources Committee, Washington, D.C., 1939, p. 386.

possible if all prices, including wages, behaved in a manner that satisfied the classical postulates of price flexibility, market clearing, and the equating of marginal cost and marginal revenue.

The reflation of prices in a recovery from a preceding recession should be regarded as a natural part of the recovery process and, in this way, is wholly different from an inflation due to a general excess in demand. Both come from an increase in aggregate demand. But only the recovery rise in prices is constructive since it is an integral part of the recovery process and tends to restore price balance. Because it is a "good thing," it presents no major problem of policy, except that of recognizing its appropriateness and not trying to prevent it. However, in the period of recovery before full employment is reached, it does involve a rise of prices in the presence of excessive unemployment.

Administrative inflation

The second type of nonclassical inflation also arises from the exercise of "market power," but can occur whether employment is full or less than full and can occur in a period of recession, in a period of stagnation, or in one of recovery. It can appear, as well, during a period when prices are also rising as a result of excessive demand.

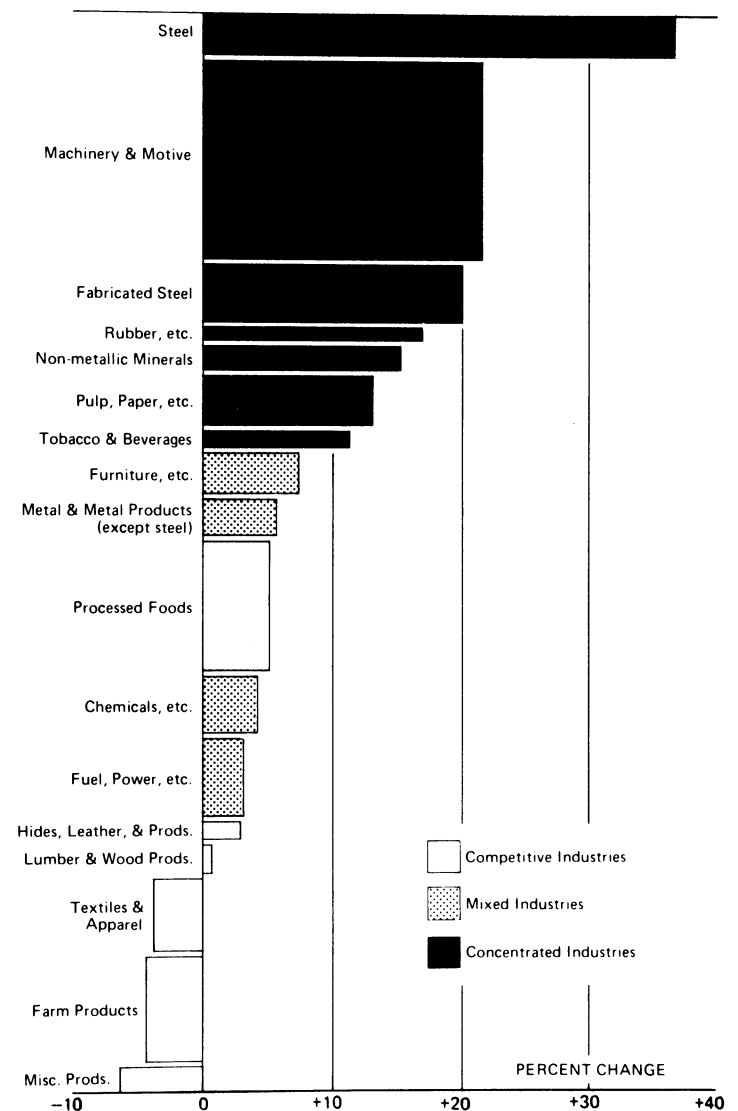
This type of inflation may be initiated by management in an effort to widen profit margins and could then be properly called "profit-push" inflation. It could also be initiated by labor in an effort to obtain unwarranted wage increases which would, in turn, be called "cost-push" inflation. To avoid any implication of its specific source, it will be called here "administrative inflation," leaving the complex issue of the initiating source open for further investigation in each specific case.

The first clear example of administrative inflation in the United States occurred in the 1950s. In the five years from 1953 to 1958, there was an 8% increase in the wholesale price index, while at the same time, unemployment of both men and machines was excessive and higher at the end than at the beginning of the period.

The present writer brought this new phenomenon to the attention of the Senate Anti-Trust and Monopoly Committee in July 1957, and in January 1959, presented the committee with Chart 3. The chart covers all items in the wholesale price index grouped into seventeen industries. The height of each column

shows the change in the index for the respective industrial group from the average for 1953 to October 1958. The width of each column indicates the relative weight the group carried in the total wholesale index. This chart shows that the bulk of the increase in the wholesale price index was in the more concentrated industries (indicated in black) while prices in the more competitive industries (indicated in white) went down or rose little. This finding was confirmed by the investigations of the Joint Economic Committee. If all wholesale prices had behaved like those in

Chart 3 **Administrative Inflation**
Wholesale Price Changes by Product Groups,
1953 to October 1958
Average Increase 8.1 Percent



Source: B.L.S. Width of column represents weight of item in the index.

classically competitive industries, there would have been no inflation. If all had behaved like the more concentrated prices, the administrative inflation would have been nearly twice as great.

It is clear that in this period the major source of the inflation was the 36% rise in steel prices and the substantial price increases in the steel-using industries. Together these accounted for more than half the rise in the total wholesale price index. Subsequent information has made it clear that the steel price rise involved a very considerable widening of steel profit margins, so that this particular administrative inflation was initiated as a profit push.

The administrative inflation from 1953 to 1958 was clearly not due to an excess of aggregate demand. It did not involve either of the other two classical types of inflation—or a reflation. It could not have taken place if administered prices had behaved in the classical manner.

Administrative inflation appears to be endemic under the conditions of modern industry. It occurs in periods of full employment when there is no excess in aggregate demand. It occurs when there is excessive unemployment. And it even occurred in the recession of 1969-70 when administered prices rose, while those prices subject to market forces and the level of employment both dropped.

Unlike reflation, administrative inflation presents major problems of economic theory and economic policy. Why do administered prices rise in a period when there is no excess in aggregate demand and classical market prices are not rising? How can it be that administered prices rise when aggregate demand is declining? And most important, how can administrative inflation either be prevented or kept to a minimum during a period of expanding demand leading to full employment, as well as after full employment has been achieved?

Efforts to control administrative inflation

Much light can be thrown on administrative inflation by considering the six qualitatively different attempts at inflation control which have been employed in the United States in the last twenty years.

Monetary contraction. The first attempt came in 1956-57 when the Federal Reserve Board sought to control the *administrative inflation* of the 1950s through a tight money policy. This more than halted the growth of the nominal stock of money and pro-

duced a 10% drop in the *real* stock of money. It also precipitated the recession of 1957-58.

This effort to control administrative inflation was a complete failure. Farm and other market-dominated prices fell with the recession and rose with the recovery when the tight money policy was reversed. But industrial prices continued to rise and, by 1959, were 5% above their 1956 level. The 13% decline in industrial production and the extra two million persons out of work had little effect in reducing the administrative inflation.

The failure of this effort at controlling inflation arose from the fact that while a sufficiently tight money policy can control a demand inflation, it cannot control an administrative inflation. This was acknowledged by the chief economic advisor to the Federal Reserve Board, Dr. Woodlief Thomas, when he wrote to the *Washington Post* in March, 1959: "Recent discussion of the influence of administered prices, stimulated by . . . the Kefauver Committee, has made a significant contribution to a better understanding of the problems of inflation and fluctuations in economic activity and employment. This contribution is in pointing out that there are unstabilizing forces in pricing actions of the private economy—on the part of both management and labor—that cannot be effectively controlled or corrected by governmental actions in the area of fiscal and monetary policies."

The Kennedy guideposts. The second major attempt to control administrative inflation was the Kennedy guidepost program which was the first to directly face this problem. When the program was being drafted in 1961, unemployment was above 6%. The problem was recognized as one of preventing administrative inflation while expanding demand through fiscal and monetary measures so as to achieve full employment.

The guidepost program was both an outstanding success—in holding down administrative inflation while expanding demand through fiscal and monetary measures—as well as a partial failure. By the end of 1965, full employment had been substantially achieved, while unemployment fell to 4%. Labor had adhered to the wage guideposts so closely that the labor cost per unit of manufacturing output was down 3%. Management had not adhered as closely, and industrial prices rose a little. This in itself was not serious and alone might have been corrected. Nearly full employment had been achieved with a

total four-year rise of less than 0.6% a year for wholesale prices and close to 0.4% for industrial products.

But this goal had been achieved at the expense of a serious distortion in the relation between prices and wage rates because the guidepost program took no account of the *reflationary* rise in the prices subject to market competition which was appropriate for a period of recovery. The increase in demand which reduced unemployment from above 6% to a level of 4%, in conjunction with only a small increase in the most administration-dominated prices, could have been expected to raise substantially the average of farm prices and other flexible market prices. And in fact this is what happened, creating some overall increase in the average of prices and living costs. Between the end of 1961 and the end of 1965, the wholesale price index for processed foods rose 8%, while the index for industrial products rose only 2%. In the same period, the consumer price index rose to an intermediate degree. Yet the wage guideposts took no account of this appropriate rise in living costs.

As the result of the failure to include a cost-of-living factor in the wage guidepost, the program suffered a partial breakdown. By 1965, the rise in living costs had absorbed more than a third of labor's legitimate productivity gains. During the same period, industry had significantly widened profit margins. When this unfairness in the guideposts became obvious, labor refused to cooperate any longer and forced wage increases larger than gains in productivity in order to catch up with living costs. Management, striving to maintain the widened profit margins, passed along the increases in labor costs. This struggle lifted the wholesale index of industrial products by another 4% from the end of 1965 to the end of 1967, but also brought wages and profits more nearly in line with each other.

Even with the partial breakdown of the wage guidepost, nearly full employment was maintained throughout 1966 and 1967 without signs of excessive demand prior to the fall of 1967. The average unemployment in each of these years was 3.8%. Farm prices did not rise, a normal indication that excess demand was not building up. Profit margins in industry, which had increased substantially over the long run, declined somewhat, but were still abnormally high. It is clear that the immediate source of inflation in 1966 and 1967 was administrative and

came primarily from the effort of labor to realize its share in the productivity gains generated during the whole guidepost period—gains which the guideposts had denied to labor.

When the whole period from 1961 to the end of 1967 is taken into account, it is apparent that most of the inflation was a reflation. In moving from a 6.8% rate of unemployment in the first quarter of 1961 to the 3.8% level of 1966 and 1967, a normal reflation would have been expected to lift the wholesale index substantially. The actual increase in prices—under 6% for the total six years—does not indicate much administrative inflation. Instead, it primarily indicates a delayed reaction of wage rates to the normal reflationary rise in living costs. One must give high, though not perfect, marks to the guidepost program.

It seems likely that with an appropriate living-cost provision in the wage guidepost, the full recovery and reflation could have been accomplished by 1965 and held for another two years with negligible administrative inflation. Whether or not full employment could have been maintained for a much longer period without further inflation is another matter. But the many claims that the guidepost program was a failure—because the total index of prices rose—fail to take account of the reflation which was a necessary part of the recovery.

War inflation. The third recent attempt to control inflation arose out of the Vietnam War and was an effort to prevent a *demand* inflation. In calendar year 1966, the federal budget was in balance according to the National Income Accounts. But military expenses were expected to increase rapidly and produce a heavy deficit unless taxes were raised. With the economy already at full employment, the extra demand for military supplies could have been expected to produce an excess in demand, causing a demand inflation unless nonmilitary demand was restricted.

This danger of demand inflation was well recognized by the administration. In January 1967, President Johnson recommended a 6% surtax to be made effective by mid-1967. But the Congress failed to act. The President repeated his request in the summer of 1967, raising the requested surtax rate to 10%, but again the Congress took no action. And again in January 1968, the President repeated his request. It was not until mid-1968 that a 10% surtax was finally passed, a year and a half too late. It brought the budget into balance by the last quarter of 1968 and

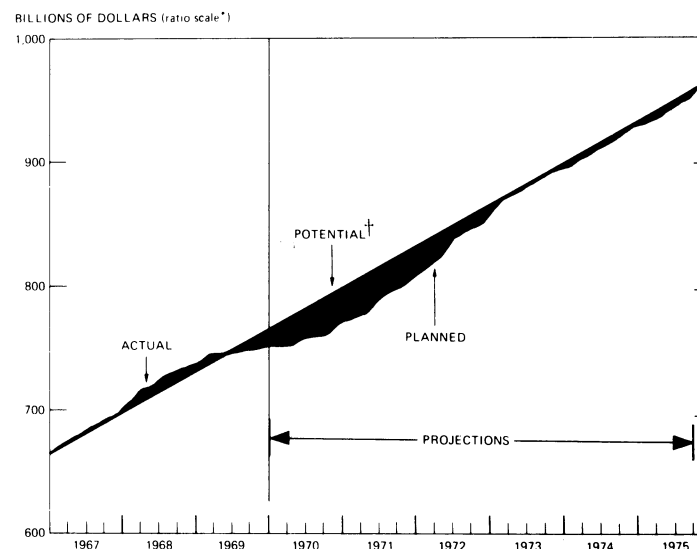
insured a substantial surplus in calendar 1969. A prime source of demand inflation was thus finally removed.

In the meantime, demand inflation had pushed the wholesale price index up more than 3% from the 1967 level, with the increase approximately equal for the market-dominated and the administration-dominated indexes. It seems probable that if the surtax had been passed in early 1967 and the guidepost policy stressed, full employment could have been maintained and the war program financed without either demand inflation or serious administrative inflation.

Planned stagnation. The fourth recent attempt to control inflation began in 1969 and was a complete failure due to a faulty diagnosis. On taking office, President Nixon announced that prices and wage rates would be left to be controlled by the free market, and inflation would be controlled in the classical fashion by fiscal and monetary means, thus rejecting any price-guidance program. A large budget surplus was maintained throughout 1969 as a result of the surtax imposed the year before, and such a tight money policy was adopted that expansion in the money stock was halted. Throughout 1969 there was no clear evidence of an excess in demand. Yet in the same year, the wholesale price index rose 4.8%, twice the annual rate of the years from mid-1965 to the end of 1968 when guidelines were to a greater or lesser degree in operation.

In his 1970 Economic Report, President Nixon explained the price rise by saying, "The inflation unleashed after mid-1965 had gathered powerful momentum by the time this Administration took office a year ago." He designated *the growth of total spending* as "the driving force of the inflation" and outlined the plan being followed to "slow down the rapid expansion of demand firmly and persistently." The actual program being followed was set forth in the body of the President's Economic Report. It was to take the heat out of the inflation by creating two and a half years of planned stagnation. This is clearly shown in Chart 4, which reproduces, on an enlarged scale, the relevant part of Chart 8 in the President's report. The chart shows the actual growth of GNP in constant prices from 1967 to mid-1969, then the halting of growth in the last half of 1969 and the planned halt to mid-1970 followed by two years in which GNP was, *by plan*, to be kept some \$30 billion a year below the estimated potential of the economy. This called for an increase in unemployment by two

Chart 4 **Planned Stagnation**
Actual Gross National Product Through 1969
Planned and Potential Gross National Product After 1969



*Seasonally adjusted annual rates.
†Trend line of 4 percent from 1955 IV to 1969 IV, 4.3 percent from 1969 IV to 1970 IV, 4.4 percent from 1970 to 1971 IV, and 4.3 percent from 1971 IV to 1975 IV.

million persons in an effort to increase the rate of unemployment to around 6%.

This brutal plan was indeed successful in creating stagnation. The continued budget surplus became a restraining force, and the money stock, measured in constant purchasing power, was reduced. Real aggregate demand declined, industrial production started down in the summer of 1969, and unemployment increased as planned. By the end of 1970, the goal of 6% unemployment had been reached and a recession had been achieved.

But stagnation did not halt the inflation. The reason is simple. The driving force of the inflation in 1969 was not "the growth of total spending." Rather, the President had unleashed the forces of administrative inflation by pointedly rejecting the guidepost program. The inflation in the 1969-70 recession was almost entirely administrative inflation, although the corn blight of 1970 contributed some "crop failure" effect. It was the kind of inflation that Dr. Woodlief Thomas had said could not be controlled by fiscal and monetary measures.

The administrative character of this inflation-in-recession is easily shown by examining the main sources of the rise in the wholesale price index. Chart 5 makes clear the parallel to the administrative in-

flation of the 1950s. As in Chart 3, the more concentrated groups are shown in black, the most competitive in white, and the mixed groups in light gray, while the height of each column indicates the price change, and the width shows the weight which each group carried in the total index.

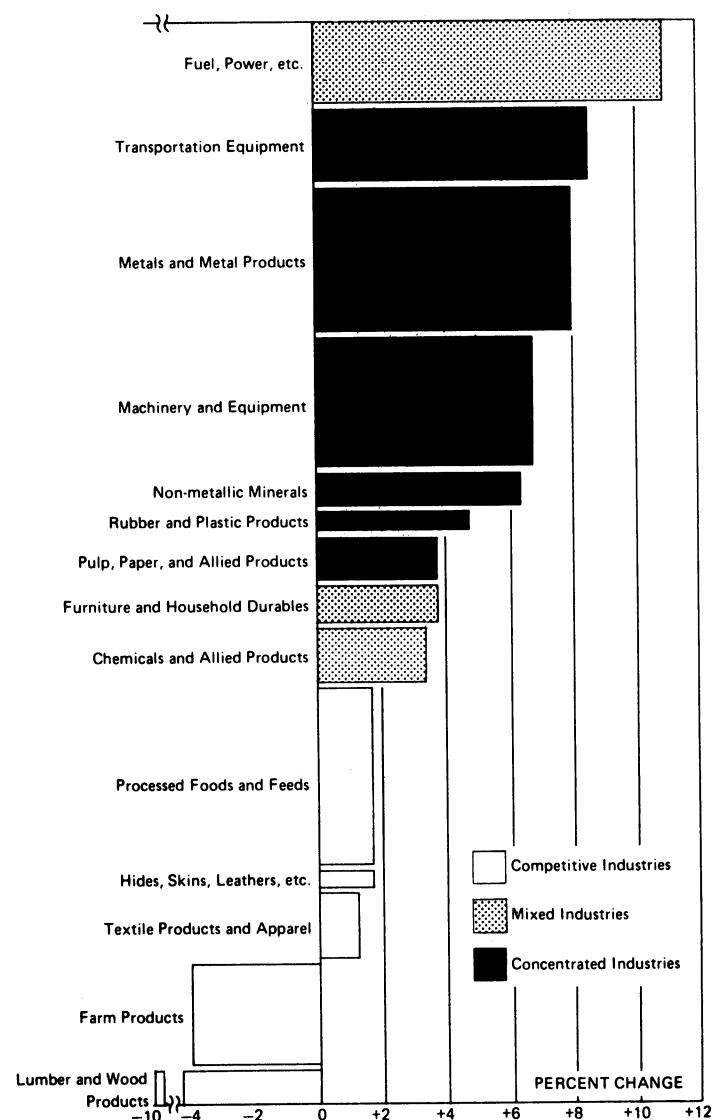
As can be seen, the great bulk of the increase in prices during the recession was contributed by the concentrated industries. In the more competitive industries, prices went up little or went down. The only exception to this tendency was the fuel and power index which rose 11% largely because of the scarcity of pollution-free fuels.

The dismal failure of this attempt to control administrative inflation by the planned creation of stagnation was acknowledged by the New Economic Policy of August 1971 which froze prices and wages after the stagnation plan had already cost the country nearly \$50 billion in lost GNP and promised more loss until reflation could restore full employment. But no apology was given to the millions who suffered unnecessary unemployment or to the stockholders whose profits were reduced. Nor was there acknowledgement that the crucial presidential decision to create planned stagnation was in direct conflict with the Employment Act of 1946.

The new economic policy. The fifth effort at controlling inflation, the President's *New Economic Policy*, involved a return to price-wage guidance and was more successful. It directly faced both the problem created by the lack of an adequate market control of prices and the necessity of reflation as the stagnation mistake was corrected. The new guidelines introduced in Phase II were a distinct improvement over the Kennedy guideposts in two respects. The wage guideline included a factor for the rise in the cost of living which would accompany the process of reflation. The price guideline focused on the holding of profit margins which allowed enterprises to increase their profits by producing more, but not by increasing prices relative to costs except in special cases. In addition, both guidelines were backed by legislative authority to exercise and enforce controls.

In its first sixteen months up to December 1972, the price-wage program was quite successful in preventing *administrative* inflation. The weighted index for the six most concentrated industrial groups in the wholesale price index rose at the annual rate of only 1.8%, while the index for the three mixed groups went up at an annual rate of 2.5%, as shown

Chart 5 **Administrative Inflation in Recession**
Wholesale Price Changes by Product Groups,
June 1969 to December 1970
Average Increase 4.0 Percent



Source: B.L.S. Width of column represents weight of item in the index.

in Table 2. Both of those increases could have been expected as a part of the normal reflation. The cost-of-living factor meant that the labor cost, per unit of output, increased by around 2%.

Competitive prices went up more than would have been expected on the basis of reflation alone. The partial recovery in this period could have been expected to raise market-dominated prices by perhaps double that of the mixed groups, or around 5%. But the weighted index of the five most competitive

Table 2

Wholesale Price Behavior Under Phases I and II (Average Increase)		
	Percent change August 1971 to December 1972	Annual rate
Concentrated industries		
Rubber and plastic products	0.0	
Machinery and equipment	+ 2.1	
Nonmetallic minerals	+ 2.5	
Metal and metal products	+ 2.6	
Transportation equipment	+ 3.2	
Pulp, paper and allied products	+ 4.1	
Weighted average	+ 2.4%	+ 1.8%
Mixed industries		
Chemicals and allied products	+ 0.4	
Furniture and household durables	+ 2.0	
Fuel, power, etc.	+ 6.1	
Weighted average	+ 3.3%	+ 2.5%
Competitive industries		
Textile products and apparel	+ 5.2	
Lumber and wood products	+11.1	
Processed foods and feeds	+12.0	
Farm products	+21.1	
Hides, skins, leathers, etc.	+24.3	
Weighted average	+13.8%	+ 10.3%
Total wholesale index	+ 7.0%	5.3%

groups of the B.L.S. index went up at an annual rate of 10.3% to December 1972. A severe drought in Texas and the destructive corn blight in 1970 broke the cattle cycle, so that less meat and fewer hides were available in 1972. Then drought in other parts of the world forced up grain and feed prices and, in turn, produced abnormally high prices for hogs, poultry, eggs, and an added increase in beef prices. The floating of the dollar in August 1971 and its devaluation in May 1972 also contributed, particularly for the flexible market prices. If the special restrictions on supply are excluded, the wholesale price index would have increased during these sixteen months at an annual rate of around 3% instead of 5.3%, almost all of it an appropriate reflationary response to the partial recovery of the period.

It should also be noted that, unlike the guideposts of 1961-65, the effects of Phases I and II were substantially fair to both labor and capital. In the last half of 1972, the division between capital and labor of the income generated by nonfinancial corporations was almost exactly the same as it was in 1969 and in the eight years of the Eisenhower Administration: 87.6% to labor and about 12.4% to capital.

The success of Phases I and II in preventing ad-

ministrative inflation suggests the efficiency of this type of control in a period of recovery. How long the controls could be effective once full employment is achieved still remains a central problem of economic analysis and economic policy.

Compound inflation and the problem of diagnosis

A particular period of inflation may be dominated by a single major source—such as a general excess in demand, as in 1967-68, or by the exercise of market power in the administrative inflation of the 1950s. Diagnosis is a relatively simple problem once the different possible sources of inflation are recognized. But inflation in a particular period may reflect a compound of several different sources. Then diagnosis becomes difficult.

Such is the case with the hyperinflation from June 1973 to June 1974. In this single year, the wholesale price index rose 14%, in part from the Arab-created rise in fuel prices, in part from the effects of inflation abroad, and in part from administrative inflation at home. But how much should be attributed to each is not easy to determine.

What is easier to determine is the possible sources which did *not* contribute to this inflation.

Clearly there was no general excess in demand. Aggregate demand went up less than prices, and real national income went down. Unemployment increased from 4.8% to 5.2% of the labor force, and the proportion of manufacturing capacity utilized declined from 83.3% to 80.6%. The economy had unused reserves of manpower and plant that could have supplied at least another \$50 or \$60 billion of demand without establishing the conditions for inflation.

Likewise, there was no element of reflation in the price rise since production declined and unemployment rose.

The rise in farm prices as a result of previous crop failures had come to a practical end with the index of farm prices down more than 7% from June 1973 to June 1974 and the wholesale food and feed index up only 3.7% during the year—together contributing nothing to the 14% rise in the wholesale index.

Finally, it is clear that wages followed, rather than initiated, the price rise. In the twelve months from June 1973 to June 1974, the average hourly earnings for the private nonfarm economy went up 8.0%,

but prices went up so much faster than wages that the real income per worker-hour went down 2.8%. Thus wage rates lagged substantially behind the rise in living costs.

The compound and three major sources. This leaves three sources to account for the 14% price rise: the energy crisis, the domestic effects of foreign inflation, and administrative inflation coming from the side of management.

The direct contribution of the energy crisis is evident in the 57.8% rise in the wholesale index for fuels, related products, and power. This alone accounted directly for nearly a third of the rise in the wholesale index. The rise in fuel and power prices also added to costs of production in nearly every field, and the raw materials for other industries such as chemicals and plastics became more expensive. Perhaps half the year's rise in the wholesale index, seven percentage points, should be attributed to the direct and indirect effects of the energy crisis.

Another part, but probably small in the total, should be attributed to the domestic effects of the rapid inflation in the leading foreign industrial countries. Throughout the year, the U.S. economy was to a considerable degree protected from foreign inflation by the floating exchange rate—but not as completely as traditional theory would lead one to expect. Traditional theory assumes that general demand inflation will lift all prices in about the same degree in the inflating country. In such a case, it could be expected that a floating exchange rate would largely insulate one country from demand inflation in another. The decline in the real value of money in the inflating country would be just offset by the decline in its exchange value. But in modern industrial countries, a general demand inflation operates first and most extensively on market-dominated prices so that they advance ahead of prices dominated by administration. As a result, a floating exchange rate does not give a country complete protection from the effects of foreign inflation. It is in this way that the flexible market prices of many imported raw materials such as lead, zinc, and copper have been raised in the United States, thus adding to domestic costs and contributing to the 14% inflation.

How much of the 14% rise should be attributed to this foreign inflation is difficult to say, but *total* imports in that period amounted to only 8% of GNP, and only a part would be involved in the wholesale index. Even taking account of the indirect as well as

the direct effects of these flexible-priced commodities, it is doubtful if they accounted for anything like half of the 14% rise in the wholesale index.

The third claimant, administrative inflation from the side of management, appears to have been a much more important element. First, most of that half of the 14% price rise still to be accounted for came in the more concentrated industries. This is shown in Table 3, which classifies the fourteen B.L.S. group indexes in the same fashion as in Charts 3 and 5 and shows the percentage increase from June 1973 to June 1974.

Of the five more competitive groups, only textiles went up as much as the total index; and the five groups taken together increased less than 2%. On the other hand, of the six more concentrated groups, all but transportation equipment went up more than the total index, and the weighted average for the six went up nearly 22%.

Table 3 reinforces the evidence already given that there was no general excess of demand to account for the inflation of the period. The prices most sensitive to rising demand rose little at the same time that fuel and the administration-dominated prices rose sharply. An outstanding example of the latter is

Table 3

Inflation from June 1973 to June 1974

A Breakdown of the B.L.S.
Wholesale Price Index to Reflect the Relative Role of
Market-Dominated and Administration-Dominated Prices

	Percent change in price index	Weighted change in price index
Competitive industry groups		
Farm products	- 7.5%	} + 1.9%
Hides, skins, and leather products	+ 3.6	
Foods and feeds, processed	+ 3.7	
Lumber and wood products	+ 5.0	
Textile products and apparel	+ 14.7	
Mixed industry groups		
Furniture and household durables	+ 9.5%	
Chemicals and allied products	+ 29.3	
Fuels and related products and power	+ 57.8	
Concentrated industry groups		
Transportation equipment	+ 6.8%	} 21.9%
Nonmetallic mineral products	+ 16.3	
Rubber and plastic products	+ 20.4	
Pulp, paper, and allied products	+ 20.9	
Machinery and equipment	+ 21.9	
Metals and metal products	+ 31.3	
All commodity index		+ 14%

Source: U.S. Bureau of Labor Statistics.

the 31% rise in the index of iron and steel prices. In the year from August 1973 to August 1974, the index for finished steel prices rose a total of 44%.

How much of the 22% price increase in the concentrated industries came from increased fuel and raw material costs, how much from the wage increases, which averaged 9.6% per man-hour for all manufacturing, how much from the increase in interest rates, and how much from widened profit margins can only be determined from an industry-by-industry analysis. But corporate profits increased substantially in this period, while real production did not. The reduced profits of the more competitive industries, which could not raise their prices as easily, tended to cover up the greater increase in the more concentrated industries within the total industry figures. The tentative conclusion is justified that a substantial part of the 14% inflation at the wholesale level arose from the excessive widening of profit margins.

A similar compound inflation occurred in the galloping inflation of the two months following June 1974. In that period, the wholesale price index rose 7.5%, or at an annual rate of 45%. This inflation reflected not only the continued rise of fuel prices, but also a renewed rise in farm and food prices as a result of drought and crop damage in the Midwest. But the price indexes for the other three competitive industry groups went up little or went down, and the bulk of the remaining price increase was in the more concentrated industries whose combined index went up 5.8%, an increase at an annual rate of 35%. Again the figures point strongly to a further widening of profit margins in those industries in which there is such a degree of concentration that management can exercise substantial market power.

In these two months of galloping inflation, the rate suggests that *the expectation* of further inflation may have played an important role. As traditional theory has explained, the pure speculator can stimulate inflation, pushing up prices through buying a part of the supply. When the speculator unloads, the price is pushed down, and the speculator has no *net* effect on price, once adjustment to the cause of price change has been made. But where an industry is concentrated and management has a substantial degree of market power, there is usually little room for the pure speculator. A speculator outside the auto industry could expect a rise in auto prices and buy, say, 10,000 cars; but it would require more than just a sell order to dispose of them. Thus the independent speculator is

not a problem in the concentrated industries.

However, an expectation of inflation can introduce a quite different effect in the concentrated industries—an arbitrary price increase by management. Once there is a *general* expectation of continued inflation, the market controls of cost and demand become even less restrictive in the concentrated industries than they would be in the more normal times, and prices can be raised by sizable amounts. Astute management seeks to “beat the gun” on inflation by raising prices more in relation to costs than if there were no general expectation of inflation. Again, only detailed industry studies would show how much this factor contributes to an inflation once it has started. What is important is that this factor can operate when inflation occurs under conditions of stagnation.

Inflation and public policy

Once the source or sources of a given inflation have become clear, the appropriate public policy is reasonably clear, except in the case of administrative inflation.

When inflation comes from a *general* demand in excess of what can be met with available resources, traditional theory correctly calls for a tight monetary-fiscal policy to limit demand.

When prices rise for particular market-dominated commodities because of a crop failure or oil crisis, traditional theory again correctly offers the alternative of rationing through price increases or, where the damage through price increases would be great, the alternative of price control and government rationing. Indeed, whether the high price of imported oil calls for rationing through greatly increased prices or calls for domestic price control and government rationing would be a legitimate matter of debate under traditional theory. In either case, the short-run answer to reduced supply is belt tightening, while the longer-run answer is the increase in supply and more efficient use.

Domestic price increases arising from inflation abroad present a more complex problem. Domestic policy would call for a floating exchange rate. Then it might simply treat the increases which bypassed the floating exchange rates in the same fashion as other temporary limitations on supply. Or policy could be aimed at helping other countries to control their own inflation.

The latter course seems indicated by the fact that much of the foreign inflation can be linked to the un-

controlled expansion in eurodollars—dollar deposits held in foreign commercial banks—which have already reached the magnitude of \$185 billion. They have arisen in part from imbalances in U.S. payments abroad with the backing of dollars in the U.S. But in substantial part, they have been created abroad and are not in any way an obligation of the U.S. Traditional theory does not concern itself with the effect from the deposit currency of one country when it is created in another. But foreign inflation is likely to continue as long as the stock of eurodollars is allowed to expand without control, and there is an increasing recognition that the effect is inflationary. A euro-dollar may have a low velocity of use in a foreign country, but as a liquid store of value, it can take the place of the country's own currency and force a rise in its velocity. This presents a problem, along with that of oil, which requires international cooperation.

Limiting administrative inflation. The really immediate issue is that of limiting the abuse of market power in concentrated industries. Because traditional theory does not envisage administrative inflation, it can give little guidance in its control. Indeed, traditional theory could not even provide a basis for setting up the principles to guide management in adjusting its prices to changed conditions. The principle of equating marginal cost and marginal revenue would have no relevance.

The first essential is to provide management with a clear set of guidelines which would define what use of market power is consistent with a national policy to achieve high employment without inflation and what actions constitute an abuse of such power. An effort to “beat the gun” on inflation is obviously such an abuse, and until management is provided with clear guidelines, it cannot be expected to act responsibly.

Labor has shown that it will abide by price-wage guidelines when it believes (1) that the guidelines are fair and (2) that management will also abide by them. This is partly because labor has a greater interest than management in avoiding inflation and partly because management will tend to act as enforcer of wage guidelines.

In the case of management, there is no possible enforcer in sight except the government. Suppose that a fair set of price and wage guidelines had already been set up. Some more responsible enterprises might abide by them, and most could be expected to enforce them on labor. But most businesses could be expected to continue to abuse their market power, and the

result of a simple publication of such guidelines would clearly be unfair to labor.

Yet, consider the advantages to management if all enterprises with significant market power were to abide by a fair set of guidelines. If a given enterprise with market power were offered a contract that would make everyone else adhere to the guidelines providing that it would agree to do so in turn, the signing of such a contract would usually be an excellent piece of business. A small diminution of discretion would promise to remove the headaches of this type of inflation, both with respect to wages and the constant need to readjust to changing prices and the accounting problems this generates. And if it would allow an expansion of real demand, operations under a prosperous economy would yield larger profits.

But only government could enforce such a contract. The problem is to work out a program of enforcement which would interfere minimally with business discretion in the carrying out of its productive activity.

It would probably be sufficient to limit the enforcement to the few hundred largest manufacturing corporations. This is where most of the significant market power resides. It seems likely that, if the abuse of market power were prevented in the more concentrated industries, and for their more important products, administrative inflation could be kept to an acceptable minimum. The government's power to interfere with the pricing process might be further limited by relating it to the rate of administrative inflation. If there were little administrative inflation as indicated by an appropriate index, the government power might be limited to the issuance of guidelines and the calling on the few corporations subject to its control to report and justify price increases. If the rate of administrative inflation were higher, the government could require pre-reporting of planned price changes which would provide an opportunity to persuade those which appeared to exceed the guidelines. Finally, the power to control prices or force rollbacks might accrue to government only if the rate of administrative inflation were high.

It may be said that such government interference with the private administration of prices by the big corporations is an invasion of individual freedom. It should be recognized, however, that the market power of big enterprise is only possible as the result of the power to operate as corporations, and the power to operate as a corporation is a grant of power from the government, not a “natural right” of individuals.

This grant of power does not entitle corporations to abuse their market power. And their very size vests them with a public interest.

An alternative approach would be to reduce or eliminate market power through the more stringent enforcement of the antitrust laws and the breakup of big business. The antitrust laws have been outstandingly successful in preventing actual *monopoly*, the industry with only one seller. There are very few industries in which there are not at least several competing producers. But these laws were never designed to prevent *oligopoly*—the current source of market power. A substantial reduction of market power will, in any case, take time.

Public policy might well combine the short-run course of guiding the use of market power with longer-run measures to reduce it, waiting on the success of each to determine the subsequent weight to be given to each.

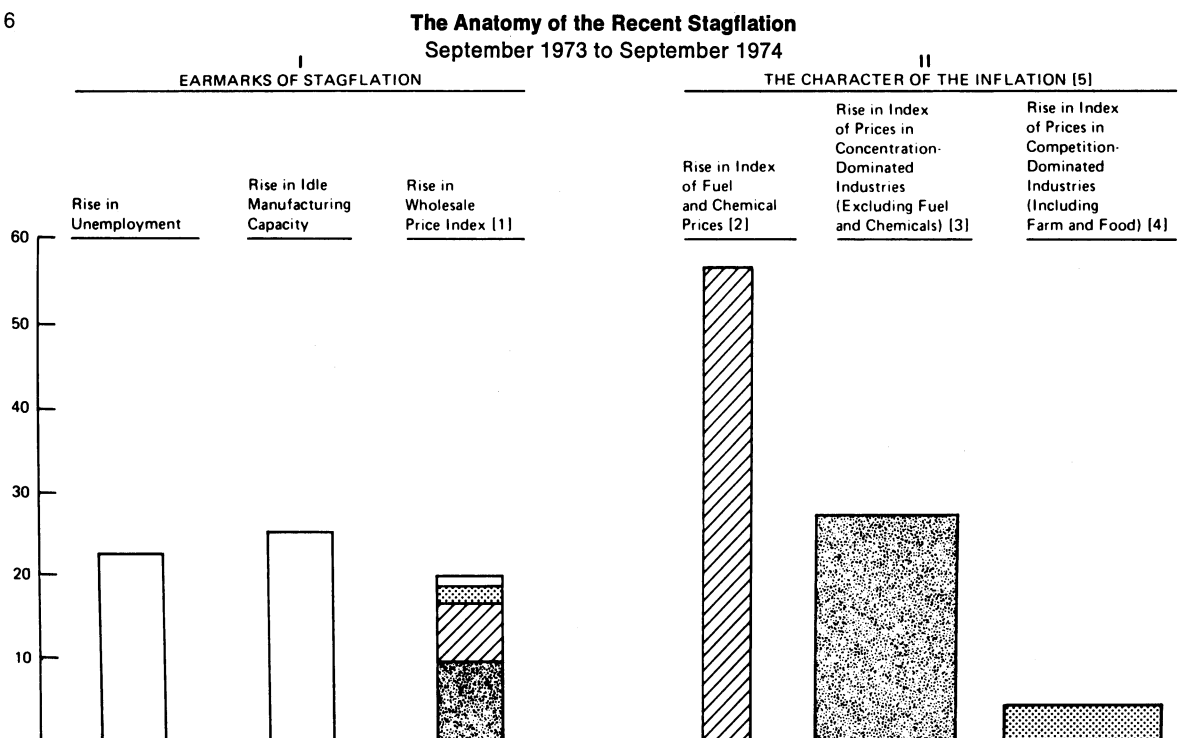
Conclusions

Simultaneous inflation and stagnation or recession is a relatively new phenomenon which lies outside the

framework of traditional theory and traditional policy. It has plagued the American economy for a score of years and clearly cannot be controlled by the traditional measures of fiscal restraint and tight money. In the United States, it has arisen primarily from the abuse of market power by big business, while the compensation of labor has lagged behind the rise in prices. Its essential character can be summarized in the simple Chart 6, which shows the anatomy of this inflation from September 1973 to September 1974. In this period of stagflation, the weighted index for the concentration-dominated industries rose 27%, accounting for half the rise in the wholesale index, while average hourly compensation to labor in manufacturing during the same period rose only 10%. The index dominated by competition rose less than 5%.

In the short run, it is likely that this new form of inflation can be substantially controlled by government through the guidance of pricing of a few hundred of the largest manufacturing corporations. To what extent it can be controlled in the longer run by reducing market power through antitrust action or the break-up of enterprises remains to be seen.

Chart 6



Source: B.L.S. and F.R.B.

(1) In addition to the industry groups included in II, the wholesale price index includes B.L.S. groups "Miscellaneous" and "Furniture and Household Durables" which cannot be attributed as primarily concentrated or primarily competitive and account for 5% of the increase in the wholesale index. (2) Weighted average of wholesale indexes for fuel, etc., and chemicals, etc. (3) Weighted average of wholesale indexes for metals, machinery, nonmetallic minerals, rubber, paper, and transportation equipment. (4) Weighted average of wholesale indexes for farm, food, leather, lumber, textiles, and their products. (5) Width of columns indicate relative weight of groups in the wholesale price index.