3.)
IMPACT OF THE COUNCIL OF ECONOMIC ADVISERS' "GUIDEPOSTS"
ON COLLECTIVE BARGAINING IN SELECTED INDUSTRIES

by

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TABLE OF CONTENTS

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	Page
I. INTRODUCTION	1
II. REVIEW OF LITERATURE	5
A. Wages	5
B. Inflation	7
1. Demand-pull inflation	9
2. Cost-push inflation	10
3. Demand-shift inflation	11
4. Combination inflation	11
C. Three Non-complementary Goals	12-19
1. Price stability	21
2. Full employment	21
3. Free collective bargaining	24
4. Methods of attaining goals	25
III. METHOD OF PROCEDURE	32
A. Productivity	32
1. Different methods of computing indexes	33
2. Limitations of the productivity index	42
B. Wage Gain Measurements	47
1. Why include fringe benefits?	47
2. Method used to measure fringe benefits in this thesis	54
IV. RESULTS AND DISCUSSION	61
A. Automobile Industry Settlements with UAW	61
1. Contract between UAW and Chrysler Corporation	61

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	Page
2. Contract between UAW and Ford Motor Company	64
3. Contract between UAW and General Motors Corporation	66
4. Contract between UAW and American Motors Corporation	68
B. Local Building and Construction Contracts Des Moines, Iowa	71
1. Contract between Cement Masons Local Union No. 21 of the Operative Plasterers and Cement Masons International Association and Des Moines Construction Council, Inc.	71
2. Contract between Bricklayers, Stonemasons, Tilelayers and Terrazzo Workers Local Union No. 2 and Des Moines Construction Council, Inc.	71
3. Contract between Hod Carriers, Building and Common Laborers Local Union No. 177 and Des Moines Construction Council, Inc.	73
4. Contract between Bridge, Structural and Ornamental Iron Workers, Local No. 67 and Des Moines Construction Council, Inc.	74
5. Contract between United Brotherhood of Carpenters and Joiners of America, Local Union No. 106 and Des Moines Construction Council, Inc.	74
6. Contract between Local Union No. 234 affiliated with the International Union of Operating Engineers A.F. of L. - C.I.O. and Des Moines Construction Council, Inc.	75
7. Contract between Local Union No. 90, affiliated with the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America and Des Moines Construction Council, Inc.	75
C. Contract between International Chemical Workers Union, Local No. 81 and Monsanto Company (Carondelet Plant)	77

	Page
D. Settlements with International Union of Electrical, Radio and Machine Workers, AFL-CIO (IUE)	78
1. Agreement between Sylvania Electronics System and IUE Local 511	78
2. Agreement between the Batavia Plant of Sylvania Electric Products, Inc. and IUE Local 352	80
3. Agreement between Westinghouse Electric Corporation and IUE	80
E. Contract between UAW and John Deere Waterloo Tractor Works	82
F. Contract Negotiations in the Steel Industry	83
V. CONCLUSIONS AND SUMMARY	86
VI. LITERATURE CITED	91
VII. ACKNOWLEDGMENTS	99

INTRODUCTION

The United States has experienced three periods of sharply rising prices: 1947-48, 1950-51, and 1955-57 (see Table 1b). Although wholesale prices have remained remarkably stable since 1958, consumer prices have drifted slowly upward, on an average of about 1.2 per cent each year. In April, 1965 the Consumers' Price Index was 109 per cent of the 1957-59 average (82). Rising prices have constituted an inflationary danger with which the United States has been much concerned.

What has been the role of wages in inflationary periods since World War II? It is difficult to determine whether wages were the cause or the consequence of rising prices. But, as Bowen has indicated, if wages rise during an economic expansion and do not fall during a contraction the trend of wages will be upward (8). This has been the actual tendency in an industrial economy like ours (see Table 1a). The question is what should a feasible wage increase rate be?

Gains achieved through increasing productivity can be distributed in a variety of ways, through increased profits, lowered prices, increased wages or combinations of these. "The benefits of higher productivity have been shared since the early nineteenth century primarily by a combination of lower prices (for the innovations) and higher wage and salary rates" (36). Since falling prices tend to discourage

investment and economic expansion, a combination of stable prices and rising wages appears to have been the generally preferred method of distributing gains from increased productivity. Table 1a indicated profits have remained relatively stable through the Fifties and Sixties of this century.

John Clark stated in 1960, "the best prospect for the coming decade appears to be a gradual diminution of the inflationary gap between wage rates and productivity ..."
(18). This has been the goal of several White House administrations. Whereas, previous administrations relied on oral admonitions urging responsible wage-price decisions, the Council of Economic Advisers in 1962 established a set of guidelines for non-inflationary wage behavior and price decisions. These are set forth in the 1962 Economic Report of the President (19).

One guidepost objective was presumably to make the public more aware of the economic significance and consequences of wage bargains and price decisions (51), especially the fact that when wages or wage costs rise more than the rate of productivity increases, prices eventually rise and the inflationary spiral continues. The difficulty of setting guides for judging such decisions as inflationary or non-inflationary was acknowledged in the 1962 guidelines proposal.

It is impossible, however, to describe in broad outline a set of guides which, if followed, would preserve overall price stability while still

allowing sufficient flexibility to accommodate objectives of efficiency and equity. These are not arbitrary guides. They describe--briefly and no doubt incompletely--how prices and wage rates would behave in a smoothly functioning competitive economy for determining whether a particular price or wage decision is inflationary. They will serve their purpose if they suggest to the interested public a useful way of approaching the appraisal of such decisions.

If, as a point of departure, we assume no change in the relative shares of labor and nonlabor incomes in a particular industry, then a general guide may be advanced for non-inflationary wage behavior, and another for noninflationary price behavior. Both guides, as will be seen, are only first approximations.

The general guide for noninflationary wage behavior is that the rate of increase in wage rates (including fringe benefits) in each industry be equal to the trend rate of overall productivity increase. General acceptance of this guide would maintain stability of labor cost per unit of output for the economy as a whole--though not of course for individual industries. (19).

The guideposts attempted to establish a pattern for non-inflationary wage behavior correlating the rate of increase in wage rates to the annual trend rate of overall productivity increase. The question is, do the guidelines really guide? Have the formal guideposts been any more effective than the oral admonitions used by previous White House administrations urging "responsible" demands and decisions from labor and industry since World War II? Have the guideposts had any impact on the currently negotiated collective bargaining contracts? Have wage rate increases been changed or halted to adapt to the guidepost pattern?

According to the Webster dictionary, impact can be shown by a change in velocity or direction. Several current collective bargaining contracts have been selected for thorough examination in an attempt to ascertain any guidepost impact. The only test of a purely objective nature is the factual evidence found in the examined contracts. We can determine only whether the wage increases and fringe benefit increases in the contracts were in line with, below or in excess of the suggested productivity increase. It is not possible to measure whether any change in the rate of wage increases occurred because of the guideposts. Many other variables such as market conditions may have been of importance. The psychological impact of the guidelines will be discussed, although such an impact is not measurable.

The contract analysis was hampered by the lack of satisfying data on both wages and fringe benefits. An effort has been made to develop methods for measuring fringe benefit gains.

The meaning of productivity is elusive. Ways of measuring productivity are diverse. Alternative ways of defining and measuring productivity were thoroughly explored in order to determine which productivity index to use as a guide in evaluating the selected contracts.

II. REVIEW OF LITERATURE

A. Wages

Many economists maintain wage increases tend to reflect productivity increases (42, 64). However, Clark Kerr in an article on the shortrun behavior of wages and productivity stated, "Disconcertingly in the short run, they display a clear tendency to move either in opposite directions or in the same direction at different rates" (56). Several studies (36, 55) were undertaken to estimate labor's distributive share in the economy. In the long run and on the average, the fact that wage increases do not exceed productivity increases was supported by these studies because they indicate labor's share has been relatively constant.

Some employers and politicians contend that wage increases have been brought about by excessive union power and were responsible for increases in the price level. Many studies have been made to attempt to determine the impact of unions on wages. The net conclusion appears to be that by-and-large the same economic pressures have been at work in nonunion plants as in unionized establishments (57, 65).

A brief summary of 100 years of labor history (88) showed that in the 25-year period, 1853 to 1879, hourly earnings rose 71 per cent while the cost of living rose 25 per cent, about one-third as fast as wages. There were few unionized plants in this period. In the 50-year period,

1853 to 1903, hourly earnings rose 127 per cent and the cost of living only 38 per cent with only a fraction of the economy unionized. The 75-year period, 1853 to 1928, was another period of few unions and hourly earnings rose 569 per cent while the cost of living rose 121 per cent or less than one third as fast. Money wages and real wages rose greatly. In the 20 years between 1932 and 1952, characterized by substantial union growth, the share of national income going to labor remained relatively stable. Department of Commerce figures showed 66 per cent of our national income going to wages and salaries in 1936. The comparable figure was 66.3 per cent in 1952.

Table 1a indicates that the share of national income going to profits has remained stable in the 1950's and 1960's to date. A study by Robert Ozanne (68) substantiates this. Ozanne concluded that unions were having an impact on the share to profits would have increased.

It would appear then that profits have also increased with gains in productivity. Although increases in profits are an avenue for distributing productivity increases, the discussion hereafter will be framed in terms of wage increases and stable prices. The shares of national income going to profits or wages are not perfectly immutable, but they have remained fairly stable for some time and profits and wages can share productivity gains side by side.

Table 1a. Changes in wages and profits in the private economy, 1948-63^a

Year	Total compensation per employee man hour (percentage change)	Corporate profits after taxes plus capital con- sumption allowances (percent of corporate sales)
1948	8.6	7.0
1949	2.5	6.4
1950	5.7	7.2
1951	9.3	6.0
1952	5.9	5.7
1953	5.8	5.9
1954	3.3	6.0
1955	2.9	6.6
1956	6.1	6.6
1957	5.9	6.3
1958	3.6	6.0
1959	4.6	6.4
1960	3.6	6.0
1961	3.4	6.0
1962	3.9	6.3
1963	3.1	6.3

^aSource: (21, p. 114).

B. Inflation

The United States has been much concerned with inflationary trends since the Second World War (59, 72). The risks of inflation are formidable. People on retirement pensions or other fixed incomes suffer the brunt of an inflationary situation while speculators and other debtors tend to benefit. Anyone who can expand profits and wages is able to improve under an inflationary situation, whereas fixed income assets lose value. Inflation erodes the real value of public assistance. Local governments find it

difficult to maintain the same standards of education and other services. Furthermore, there is always the possibility that creeping inflations will develop into galloping inflation, followed by recessions or depressions. Thus, there is a solid basis for policies aimed at preventing inflation.

Our adverse balance of payments provides another reason for preventing inflation. Since 1958 we have experienced outflows of gold and massive increases in short term notes to foreigners. Our government's expenditures abroad were maintained or even increased during this time.

Inflation necessarily jeopardizes our goals of full production and full employment. Price stability has thus become a policy priority.

Although union wage pressures do not appear to have significantly redistributed income, such pressures are still cited as a factor in creating inflation by forcing the wage level up faster than the average gains in productivity.

Inflation is defined herein as general price level increases, measured by such composite indexes as the Consumers' Price Index or the Wholesale Price Index. Table 1b sets forth the relevant data for the years 1947 through 1963.

Several current theories of inflation in terms of causation are briefly described in the next section.

Table 1b. Unemployment and prices, United States, 1947-63^a

Year	Unemployment as a percent of civilian labor force	Prices (1957-59=100)	
		Wholesale	Consumer
1947	3.9	81.2	77.8
1948	3.8	87.9	83.8
1949	5.9	83.5	83.0
1950	5.3	86.8	83.8
1951	3.3	96.7	90.5
1952	3.1	94.0	92.5
1953	2.9	92.7	93.2
1954	5.6	92.9	93.6
1955	4.4	93.2	93.3
1956	4.2	96.2	94.7
1957	4.3	99.0	98.0
1958	6.8	100.4	100.7
1959	5.5	100.6	101.5
1960	5.6	100.7	103.1
1961	6.7	100.3	104.2
1962	5.6	100.6	105.4
1963	5.7	100.3	106.7

^aSource: (21, pp. 230, 256, 260).

1. Demand-pull inflation

Most inflations of the recent past appear to have been war-induced. Such "traditional" inflation reflected excessive demand in terms of available supply. The 1947-48 period of rising prices appears to be a good illustration of the demand-pull explanation of inflation. An excess demand in the product markets pulled or bid prices up, leading naturally to increased profits and production was increased. An excess demand was then created in the labor market and wage rates were pulled or bid up. Excess product demand pulled up prices of goods creating excess labor demand which pulled up wages.

2. Cost-push inflation

Inflationary trends of the past few years, however, were called cost-push induced by labor pressures and administered prices (37, 70). Cost inflation stemmed from the theory that wage rates were not strictly market determined prices. Wage rates, instead of adjusting freely and quickly to the level where labor demand equated labor supply, were administered and could rise even when there was no excess demand for labor. The crucial difference from demand inflation was that rising wages were not, for each and every case, caused by an actual scarcity of labor forcing employers to compete for laborers by bidding wages up.

If the employer granted or was forced to agree to a wage rate raise with no scarcity of labor, costs rose and producers were not willing to supply the same amounts of goods at prevailing prices. A reduced supply would face the same demand for goods and until prices rose in the same proportion as the wage rates, there would be a tendency for demand to exceed supply of goods, thus causing prices to rise until the previous ratio of wages to prices was restored. Morethan likely, however, the employer would directly raise the price instead of reducing supply and letting the market bid price up. This type of inflation was then cost induced, pushed up because of power forces pushing up wages.

3. Demand-shift inflation

Demand-shift inflation was theorized as originating from excess demand, but not necessarily an excess demand for goods in general. Rather there was a strong increase in demand for one particular good or class of goods. (An equivalent reduction in demand for other goods may also have resulted). The resulting demand pressures on the particular industry or industries would bid up prices and profits, inducing producers to expand output. Labor's imperfect mobility caused higher wage rates in order to induce workers to move (another explanation offered was that employers were more susceptible to labor demands and more easily granted wage increases, especially in a highly unionized industry). Workers in other industries noting wage increases in the first industry would seek to keep their wages in line and generalized inflation was induced without any general excess demand, just a shift in demand.

4. Combination inflation

The difficulty of separating the variables of cost-push and demand-pull inflation has hampered any empirical study categorizing inflationary situations as either cost induced or demand induced. The demand shift theory clearly indicates the intermeshing of the two. Cost and demand factors tend to become entangled and the cause of an

inflationary episode more often than not becomes obscure and subject to much controversy (6). Attempts were made to blame the postwar (World War II) inflation on trade unions negotiating wage increases which caused the rapid rise in the cost of living. Such an analysis completely ignored other aspects of the situation. Most important was the fact that many consumers were holding money reserves which they were eager to spend on consumers goods. This demand certainly contributed to inflation and would probably have caused a price increase without a wage increase.

Inflation resulted from pressures from the demand side, the cost side or from a mixture of the two. Certainly costs cannot push prices up without a demand for the product. Unless demand expands, the increase in cost would result in less production and less employment instead of a continuing rise in the consumer price level (63).

C. Three Non-complementary Goals

Three factors affected the labor market and produced concern over wage pressure on the price level.

The first was the revolution in economic thought by Keynes and his interpreters, in particular the role assigned to fiscal and monetary policy in maintaining high levels of output and employment. The second was the political acceptance of full employment as a major goal of public policy. The third was the rise of trade union power in many strategic sectors of the economy under the protection, in the United States of laws guaranteeing to workers the right to organize and imposing upon employers the duty to bargain. It was the conjunction of these developments, which could not fail to have a profound effect on the labor market, that produced present-day concern with the wage pressure on the price level (35).

Some economists maintained the United States has three non-complementary goals: price stability, full employment and free collective bargaining with strong unions (87, 48). It was possible to have any two but not all three. Involuntary unemployment was one method of checking inflation and it has become socially unacceptable. Expansionist policies, increasing employment or decreasing unemployment also expanded the price level upsetting the goal of price stability. The United States economic policies and objectives placed us on the proverbial horns of a dilemma. The possibility of having both full employment and a stable wage and price level without regulating the wage bargain was, to some economists, remote.

Speaking generally, it seems reasonably clear that union pressure for steadily increasing wages and various fringe benefits involving

money outlays introduces an inflationary bias into the economic picture, particularly if one starts from the assumption that full employment is to be maintained at all times. The bias may not be particularly noticeable on the upswing of the business cycle, when factor prices and product prices in nonunion industries actually may rise faster than in the collective bargaining sector. But collective bargaining unquestionably introduces rigidities on the downturns (23).

1. Price stability

The importance of price stability to the economy was already covered before in this thesis and will not be reiterated again. The reader is referred to the section on inflation.

Price stability did not require all prices to remain unchanged. In a free, competitive society, individual prices responded to market pressures. Flexible relative prices served to allocate scarce goods and services. Prices must fall as well as rise, in order to guide resource movements without forcing a steady over-all price level rise. A steady over-all price level rise was the necessary ingredient for insidious inflation.

2. Full employment

Lord Beveridge's classical definition of full employment was "always more vacant jobs than unemployed men, not slightly fewer jobs." (5). This meant the demand for labor should always be greater than the supply under conditions of full employment and prices would show a continued

tendency to rise. We defined such a situation as inflationary in the section above.

But a definition of full employment was a little more complex. Full employment was not simply zero unemployment because there was always frictional unemployment. Some workers were idle for seasonal reasons; some workers who had lost a job in firm, industry, or general locality of declining employment had not yet moved to spots where unfilled vacancies existed; persons who voluntarily gave up a job to search for another and was unemployed between jobs; new entrants to the market required time to find their positions; retired workers appeared as unemployed for a time. The amount of frictional unemployment was not necessarily stable over time. It depended on how stable the economic conditions were. If there was extensive redistribution of demand, frictional unemployment would be greater. It also depended on flows of information about job opportunities and labor mobility.

But just how extensive was frictional unemployment? The unemployment index did not measure the national excess demand for labor and other factors listed above were not measured. It was impossible to categorically say at what point full employment was reached.

An empirical analysis, "Wage Behavior in the Postwar Period", by William G. Bowen (8) was an attempt to analyze

the situation. The relationship between unemployment and the rate at which money wages rise was the basis of the Bowen study. Results obtained can be summarized as follows: (1) wages rise faster when unemployment was relatively low versus relatively high, (2) there was no evidence that short run variations in the unemployment level produced any significant change in wage behavior, (3) there was no evidence of any systematic time lag, and (4) no evidence that wages fall readily. It was further noted that the 1958 recession suggested the timing of key long-term contracts vis-a-vis prosperity periods and the onset of recessions can be significant.

Bowen's empirical findings definitely suggested the existence of the policy dilemma (7). Decreases in the wage increase rates appeared to be achieved only at the expense of greater unemployment. Wages in general continued to rise faster than a rough index of output per man-hour even when unemployment was above the non-frictional level. This meant monetary-fiscal authorities face the situation where labor costs will likely rise before full employment was reached. It took considerable amounts of unemployment to stop wages from rising faster than output per man-hour. The evidence showed the "normal" rate of wage increase was larger than 2.5 per cent annually whenever unemployment was below 9 per cent of the nonfarm labor force.

3. Free collective bargaining

Collective bargaining was the term assigned to a method of determining wages and working conditions for those employed by others. It was defined as a continuous relationship. The term collective comes from the group relationship, especially on the labor side. Nowadays, collective can also be applied to many employers (corporations). This thesis was mainly concerned with the negotiation aspect of collective bargaining; the negotiation of written agreements between employers and unions as to the rate of pay, hours of work and other conditions of employment. Naturally, since collective bargaining was defined as a continuous and dynamic institutional process, it also included the administration, application and enforcement of the contract. These parts of collective bargaining, though equally important, were not stressed in analyzing the impact of the guidelines.

The adjective free was attached to emphasize that the wage bargain should not be regulated. Controlling labor relations tends to weaken private bargaining. Collective bargaining, a micro-economic process, performed well at its task. It cannot be expected to solve macro-economic problems in total, but there was continued evidence of its growth and adjustments to current problems.

"Collective bargaining can and does deal effectively with adjustments to the impact of technological change on the work force of a particular plant or company. It cannot, however, deal with the implications of automation for the labor force of the economy as a whole. Collective bargaining can deal internally in effective fashion with the problem of racial discrimination at the plant level. It cannot solve, nor should it be expected to, the national problem of integration." (24).

Survival of free collective bargaining meant that concepts of individual freedom and a competitive economy were preserved. There were many indications that collective bargaining did not fall down on the job. Use of long term contracts, better informed and trained negotiators, so negotiations were more objective, and an improved record of industrial peace by the elimination of strikes during life of contract and increased use of grievance arbitration, even maintaining permanent arbitrators were a few of the accomplishments. Joint study committees were becoming more and more prevalent as a means of solving long range problems.

4. Methods of attaining goals

Since price stability, full employment and free collective bargaining were all given governmental sanction, the administration was seeking methods of preventing wage and price behavior in the market-power industries from getting out of line and raising the overall price level

and continuing the inflationary spiral. Various policy approaches were suggested to solve this problem. Voluntary restraint was one method suggested. Some type of direct regulation of wages and prices was another approach. The third approach, generally suggested, was to let competitive market forces be more effectual in shaping wage-price settlements in the country's major industries (70).

Direct governmental action was never a serious contender as a solution in the United States. The use of compulsory arbitration in labor disputes or instigating a system of price controls was wholly contrary to our free and competitive society. There were other serious objections to direct control, other than its political impracticality. Standards used and how to adjust them to changing conditions would be difficult to decide on. Decisions on outlawing the right to strike or employers' right to set wages and prices would be extremely difficult to make and defend.

Only in war time has it been politically expedient to institute a system of wage and price controls. And yet there was some question as to how effective the controls were, even with the psychological aid of a war-oriented public. "Even during wartime, unions forced the abandonment of wage stabilization policies and private enterprise obliged the government to lift price ceilings; and the

prospect of "permanent" guideposts in peacetime would a fortiori tempt erosion, if not outright defiance." (87). In countries where unions were made to exercise restraint (Scandinavia), there were substantial increases over and above the union rate increases as a result of upgrading labor, loosening wage incentive systems and other forces (72).

Removing various economic protections and immunities many groups now enjoy was one way suggested to help competitive market forces become more effectual. This would include further reductions in tariffs, improved training facilities for jobs in expanding fields, lower taxes on cost-saving capital expenditures and the like (70). The government must also keep a constant vigil so as not to add more strength to groups already possessing considerable market power. This solution was not advocating no government. No government at all was like saying no law and this was not the mark of freedom proponents of this solution desired.

Voluntary restraint through effective public opinion and tri-partite conferences was a method sought to inject national consideration into private bargains, especially those which set patterns. The Federal mediation and conciliation service was an agency making use of the tri-partite conference to attain acceptable labor peace (80).

There were objections to the use of third parties in the collective bargaining process because such intervention makes voluntary agreements less likely and generates still further government intervention. Instead of making the parties more responsible it made them less (25).

Admonitions urging responsible wage-price decisions have been pouring out of the White House since the 1950's. Such admonitions recognized the decision makers held considerable economic power in their hands.

In significant proportions, society's economizing decisions are made, out of hand, by relatively few people who sit above the market key positions within huge conglomerates of economic power. I suggest that the admonishers are beginning to sense the fact that the significance of the possession by a few of a great power over the economy, and are advising and pleading that this power be used responsibly in the broad social interest. (61).

Although preceding administrations used morally persuasive techniques to control inflation in the wage bargain, the 1962 Economic Report of the President set out these views in black and white from authorities for the first time. Another step was taken to apply pressure to the bargaining situation in order to attempt to make bargaining participants self-interest more consistent with the social goals of price stability and full employment. An informed public was considered helpful in creating an atmosphere for responsible wage-price decisions. The

guideposts were an attempt to create such a public. (59).

One contribution of the guidelines was clearly indicating why inflation was harmful and should be controlled. They explicitly attempted to promote a better understanding of relationships underlying productivity, wages, costs and prices. The guidelines made clear that when employment costs rise at a higher rate than the rate of rise in productivity, prices will eventually rise and inflation continues creeping onward.

The public interest, according to the guideposts, was best served by wage rate increases equal to the trend rate of overall productivity increases. The annual trend increase in national productivity meant an average annual percentage rate of growth over a number of years in the output per man-hour of the economy as a whole. There were qualifications added to the general guide.

These are advanced as general guideposts. To reconcile them with objectives of equity and efficiency, specific modifications must be made to adapt them to the circumstances of particular industries. If all of these modifications are made, each in the specific circumstances to which it applies, they are consistent with stability of the general price level. Public judgments about the effects on the price level of particular wage or price decisions should take into account the modifications as well as the general guides. The most important modifications are the following:

1. Wage-rate increase would exceed the general guide rate in an industry which would otherwise be unable to attract sufficient labor; or in which wage rates are exceptionally

low compared with the range of wages earned elsewhere by similar labor, because the bargaining position of workers has been weak in particular local labor markets.

2. Wage-rate increase would fall short of the general guide rate in an industry which could not provide jobs for its entire labor force even in times of generally full employment; or in which wage rates are exceptionally high compared with the range of wages earned elsewhere by similar labor, because the bargaining position of workers has been especially strong. (19)

In 1962, the Economic Report of the President carefully stated productivity was a guide not a rule for making wage and price decisions, and they do not constitute a mechanical formula for determining if a particular wage was inflationary. "They will serve their purpose if they suggest to the interested public a useful way of approaching the appraisal of such a situation." (19).

Nevertheless, the guidelines were printed and once a firm stand was taken, the government's advice should be more difficult to ignore. The government may find it difficult to back off and sanctions may be deemed necessary to enforce the guidepost standard, stabilizing wages and prices. In 1963, the guidelines were reiterated (20) and in 1964, the administration was bolder and described the guideposts free from methodological doubts and stated, as it implied in the 1962 report, a 3.2 percent rise of annual productivity should be applicable. It flatly

stated the guidelines cover the vast majority of cases and that the qualifications applied to few cases (21). President Johnson continued the guideposts along with the 3.2 per cent annual productivity figure in the 1965 report (22).

III. METHOD OF PROCEDURE

A. Productivity

The idea of a wage adjustment system relating wage increases to increases in the general productivity level appeared in the immediate postwar years (47). Gearing wage increases to productivity was even accepted by some unions. As far back as 1948, the General Motors Corporation and International Union, United Automobile, Aerospace and Agriculture Implement Workers of America (UAW) contract included the 2.5 per cent annual improvement factor (43).

This idea was not without difficulties. Many problems were in need of solution before it became feasible. The 1962 Economic Report of the President pointed out the many difficulties in determining productivity. The unavailability of statistics for certain industries to determine that individual industry's rate of growth was a great hindrance. Another difficulty was the fact that any rate of productivity calculated depended on the time periods selected and input and output factors selected. Different decisions on these problems provided varying solutions.

Hence, labor, management and/or government all gave different appraisals of rising productivity at one time

or another. The Council of Economic Advisers (CEA) suggested 3 per cent as a noninflationary guidepost. Management (Ford in 1958) spokesmen indicated 2 per cent or maybe even 2.5 per cent was a noninflationary increase. Union officials generally offered figures much higher. Walter Reuther used a figure of 3.9 per cent in 1958 and suggested 4.9 per cent as appropriate in 1964.

1. Different methods of computing indexes

Productivity was not easy to define. Various references were made earlier to productivity and its relationship to wage increases and inflation, but more precise clarification must be made on this ambiguous term. The term productivity meant the relationship between total output and any or all of the inputs employed in production. It was the ratio between output and inputs, measured in physical volume, of the entire economy or a major sector, where output was the numerator and inputs (all productive ingredients which jointly go into production yielding that output) make up the denominator. Measurements were not precise enough to show the influence on output, of changes in the average quality of labor (education, health, incentive, etc.); changes in the quantity of tangible capital (plant equipment and inventories); changes in the ratio of non-productive workers to productive workers available per

man hour; or changes in quality of purchased materials or ratio of these materials to output. Not being able to account statistically for changes in quantity or quality of the productive ~~inputs~~ made it appear as though the inputs included and measured were entirely responsible for the higher rate of productivity change (2, 45).

The CEA used the output per unweighted man-hour measure of productivity for the private sector of the economy from 1947 to 1960 to obtain the figure 3 per cent, as a noninflationary guide. The report gave verbal recognition of the importance of capital inputs in figuring output per man-hour, but their ultimate figure did not take it into consideration. Professor Kendrick's estimate of a 2.1 per cent productivity rise was for the years 1919-1960 and considered both capital and labor inputs (54).

a. Three Bureau of Labor Statistics indexes Labor productivity related total output only to the labor input. The labor input was usually measured either by the number of production worker man-hours paid for the man-hours worked, or the number of employees. Dividing the labor input measure into the measured output (possibly the manufacturing index) the index output per man-hour was obtained. Limiting the input (the denominator) of a productivity index naturally resulted in a higher annual

rate of change in productivity.

Changes in labor productivity do not measure changes in total output that are caused by or due to the labor input. All that a labor productivity index does is to associate changes in total output with changes in the labor input. Further, the most widely used labor productivity indexes measure only quantitative changes in the labor input. They ignore or leave aside qualitative changes in the labor input, e.g. education, health, incentive, and so on. The fact that the labor productivity index leaves out nonlabor inputs and qualitative changes in the labor input is vitally important. Actually part of the increase which occurs in a labor productivity index is a reflection of changes in the productive inputs which were left out of the denominator. Restricting the input denominator in this way increases the average annual rate of change in productivity. (4).

All major productivity indexes used relatively the same measure of total output. The three Bureau of Labor Statistics series used constant gross national product data excluding the government sector which, of course, was the real gross private product. As indicated before, any real differences in the productivity indexes were in the labor input measures. One of the Bureau of Labor Statistics indexes used man-hours paid for (from establishment data), one used man-hours worked (data gathered by the Census Bureau) and the third one used number of employees (data gathered by the Census Bureau). Since the number of paid vacations, holidays, sick leave, etc. per employee gradually increased over the years, output per man-hour worked tended to rise a little faster than

output per man-hour paid for.

b. Kendrick's weighted index Like the three indexes described above, John Kendrick used variant forms of gross national product data to measure total output. None of the Bureau of Labor Statistics indexes adjusted the input figure to the qualitative mix. Kendrick felt it did not make sense to count an hour worked by a highly trained engineer the same as an hour by an unskilled laborer. He, therefore, developed an index where man-hours worked were weighted by base-period average hourly earnings in about 40 industry groups of the private economy. It was assumed differences in average hourly earnings indicated qualitative difference in the labor input. The weighted aggregate rises significantly more than straight man-hours, hence the real product per unit of labor input rises correspondently less (2).

Table 1c summarized variations in the labor productivity indexes using different time periods. The first Bureau of Labor Statistics index represented man-hours paid for, the second man-hours worked and the third number of employees. The similar results of the 1958-63 period may have been caused by increases at similar rates in man-hours paid, man-hours worked and number of employees.

Productivity trend rates varied for given time periods, from one major sector of the economy to another, and from

Table 1c. Comparison among indexes of labor productivity^a

Labor Productivity Indexes	Average Annual Percentage Rate of Growth ¹		
	Total Private Economy		
	1947-60	1957-62	1958-63
BLS Manhours (man-hours paid) ²	3.08	3.04	3.24
BLS Manhours (man-hours worked) ²	3.33	2.83	3.16
BLS Manhours (number of employees) ³	2.70	2.57	3.05
Kendrick-unweighted Manhours ⁴	3.18	-- ⁵	-- ⁵
Kendrick-weighted Manhours ⁴	2.86	-- ⁵	-- ⁵

¹Terminal method employed.

²Source: BLS, Indexes of Output per Man-hour for the Private Economy, 1947-63, Feb. 1, 1964, Table 1 and 2.

³Source: Same as 2. Index computed by multiplying labor force estimate of output per manhour by the ratio of index for manhours to index of employment. These indexes are included in Table 2 of the source.

⁴Source: Kendrick, Productivity Trends in the United States, op. cit., p. 335, Table A-XXII for the 1947 index; 42nd Annual Report, Natl. Bureau of Economic Research, op. cit., p. 40 for the 1960 index.

⁵Series do not include years 1961-63.

^aSource: (45, Table 2).

one major sector of the economy to the total private economy. Using the labor productivity index most generally accepted the Bureau of Labor Statistics series based on establishment

data for man-hours paid, Table 2, illustrated these variations. The time period chosen clearly made a difference in the productivity trend rate, just as how the economy was defined made a difference.

Table 2. Labor productivity trend rates, various sectors and time periods^a (BLS establishment data on manhours paid)¹

Sector of economy	Time period				
	1909-47	1909-62	1947-62	1952-62	1957-62
Total private economy	2.0	2.4	3.0	2.8	3.0
Non-agriculture	1.9	2.1	2.4	2.3	2.7
Agriculture	1.3	2.4	5.8	5.2	4.7

¹Source: BLS Productivity and Technological Trends in the Private Economy, 1947-62. Sept. 26, 1963, pp. 26-27. (Tables 2 and 3). Computed from least squares trend of the logarithms of the index numbers. Trend rate of total private economy for the period 1947-63, based on the least squares method, is also 3.0. For the period 1947-62, estimate of productivity trend based on output per employee index is 2.7 (ibid., pp. 4, 25).

^aSource: (45, Table 3).

c. Total productivity index An analysis of labor and/or of capital productivities, computed separately gives an incomplete picture of economic progress of particular industries or countries. A sharp rise in, say labor productivity can be merely the reverse side of the fall in

capital productivity, without one indication whether the rise in one is more important in some sense, than the fall in the other (33).

Attempts were made to measure total productivity (54), but total productivity measures were not yet published by governmental agencies (except agriculture). This was due partly to theoretical and partly to statistical problems connected with the measurement of capital stock and services. If capital were rented by hour, week or month like labor, there would be no problem, but it was purchased, not hired. Furthermore it lasts a long time and the cost was difficult to ascertain.

Kendrick devised an index he called total factor productivity which was the average productivity of an arithmetic combination of labor and capital, in which capital included land. His price of capital was the average rate of return, and this tended to be high in expanding industries and low in static industries.

Evsey Domar criticized the arithmetic combination because it assumed the marginal product of inputs was changed only by the other forces not included in the index and always in the same proportion. The ratio remained constant and dependent on the ratio of quantities of inputs, however, fast capital grows relative to labor. Domar felt a geometric index, using income shares rather than prices as

weights would be better because labor's share has increased relatively little and this would be more realistic than constant relative prices (34).

However, since labor was the major input, the real product per unit of labor input differed little from total factor productivity measures, particularly if the labor measure was weighted by major types of labor input.

For capital, left alone with labor and assigned a modest weight, plays a minor role, and the index imitates the movements of labor productivity (ratio of value added to labor input), the rank correlation by industry between the two measures of productivity reaching 94 per cent (34).

d. Index used in this thesis The productivity index used as a guide for measuring the guidepost impact was the same measure used by the CEA and for essentially the same reasons the CEA used a labor productivity index. Statistics were much more readily available for calculating a labor productivity index and they were not subject to as much controversy as using capital inputs was one reason. The evidence submitted by Domar (34) illustrating that the capital input played a minor role and that the labor productivity and the total factor productivity measures were highly correlated were also convincing arguments for the use of a labor productivity index. Furthermore, the contract analysis was then made in accordance with the guidepost principles.

The Bureau of Labor Statistics series based on establishment data for man-hour paid has now become the dominant index and was the specific one used by the CEA. In January 1964 the CEA further defined the trend change in productivity for any given year as the five year moving average of the annual percentage changes in the total private economy (21). Table 3 summarized these changes in productivity and wages in the postwar period.

Table 3. Changes in productivity and wages in the private economy since 1947, percentage change from previous year, except trend productivity^a

Year	Productivity ¹	Trend Productivity ²	Total compensation per man-hour
1948	3.6	-	8.6
49	2.8	-	2.5
1950	7.1	-	5.7
51	2.5	-	9.3
52	2.2	3.7	5.9
53	4.0	3.7	5.8
54	1.8	3.5	3.3
1955	4.4	3.0	2.9
56	.2	2.5	6.1
57	3.5	2.8	5.9
58	2.4	2.5	3.6
59	3.6	2.8	4.6
1960	2.0	2.3	3.6
61	3.4	3.0	3.6
62	4.5	3.2	4.0
63	2.9	3.3	3.1
64	3.1	3.2	3.8

¹Output per man-hour for all persons; labor input based primarily on establishment data.

²Average annual percentage change in output per man-hour during latest five years.

^aSource: (22, p. 109).

Although the productivity index used was the one with statistics most readily available, there were many sources of procedural error which were pointed out by the Bureau of Labor Statistics. These sources were: output and man-hour data provided only partial coverage requiring imputation of some sort, changes in quality of goods and services were not accounted for in data or technique; difficulties arose in maintaining consistency in estimating output and inputs, there was variation in trends of individual component factors and industries, many differing from sector or the entire private economy trends, and year to year changes were irregular and not necessarily indicative of long-term trends (2, 34).

2. Limitations of the productivity index

Even if we assumed no procedural errors and that the productivity trend rate computed was the true rate, there were several conceptual limitations to accepting the resulting index number as a noninflationary wage guide. These limitations involve job upgrading, structural shifts and new entrants. (16).

In addition, the measure of productivity used for the general guidepost is not corrected for certain "inflationary" biases. As identified in this section, they include: the acceleration of capital inputs during the postwar period; the "lost" productivity of the farm sector; and the overstatement of productivity due to the exclusion of the government sector, and the so-called shift effect (the movement of employees

from jobs of low productivity and low pay to jobs of higher productivity and higher pay).
(4).

Changes in the composition of labor occurred when a worker was shifted into a higher productivity and higher paid position, usually a more skilled job. These shifts were described as job upgrading. "Such changes may either add to or subtract from the increment which was available for wage increases under the over-all productivity guide." (19).

These facts were presented in Table 4. (The figures used in the following tables were my own hypothetical calculations, but the models were created by A. L. Gitlow (45). Arthur Burns (16) also gave an excellent description of the same situations.) The assumptions for this

Table 4. Effect of upgrading

Input-output category	Time period (0)		Time period (1)	
	High productivity	Low productivity	High productivity	Low productivity
Sector output	110	40	140	40
Number of employees	10	5	10	5
Output/employee	11	8	13	8
Total output of economy	150		180	
Labor productivity, total economy	10		12	

model were: (1) a two sector economy, high productivity and low productivity; (2) output measured in standardized units and real terms; (3) labor was the only input or production agent; and (4) in the base time period (0) workers received real wages equal to average product of labor in sectors where each worker was employed. Assuming a worker in the high productivity sector was upgraded and the shift occurred in time period (1), the sector output increased from 110 to 140 units due to increased efficiency of the upgraded worker.

If the upgraded worker received a wage increase equivalent to the increased output, there was no productivity gain left for other workers. But labor productivity for the total economy increased 20 per cent indicating a further economy wide wage increase should be forthcoming and apparently some degree of inflation or unemployment could occur along with it.

Structural employment shifts were concerned with changes in the industrial composition of the economy. Shifts from agriculture to manufacturing, railroads to trucks, automobiles and/or planes, and coal to gas or oil meant reallocation of the inputs (labor and other agents of production) from low productivity sectors and industries to high productivity ones. Using the same model as the upgrading analysis, Table 5 amended it in time

Table 5. Effect of structural shift in the economy

Input-output category	Time period (0)		Time period (1)	
	High productivity	Low productivity	High productivity	Low productivity
Sector output	110	40	121	32
Number of employees	10	5	11	4
Output/employee	11	8	11	8
Total output of economy	150		153	
Labor productivity, total economy	10		10.2	

period (1) to account for a structural shift (one worker to the high productivity sector). Output rose 11 units in the high productivity sector and dropped 8 units in the other sector. The total output net gain of 3 units increased total productivity 2 per cent. If the workers in the high productivity sector continued to receive the average product of their labor (as in assumption 4) all 11 units of increased output will be absorbed by the shifted worker's increased wage. No portion of the overall increase in output was available for a general wage increase.

New workers were assumed better educated and allocated in greater proportions to high productivity sectors or industries. Illustrating (Table 6) again with the

Table 6. Effect of new entrant to high productivity sector of the economy

Input-output category	Time period (0)		Time period (1)	
	High productivity	Low productivity	High productivity	Low productivity
Sector output	110	40	121	40
Number of employees	10	5	11	5
Output/employee	11	8	11	8
Total output of economy	150		161	
Labor productivity, total economy	10		10.06	

same basic model, a new entrant was employed in the higher productivity sector in time period (1). It was further assumed his contribution was equal to the average output. Once again if workers received the same wage the rise in total productivity of 0.06 per cent was absorbed by the new entrant. Only if the workers in high productivity sector accepted lower real wages below average real output would a portion of the productivity increase be available for a general wage rise. Therefore, if new workers gravitated to the higher productivity sector because of the real wage differential, a portion of the resultant economy-wide increase in productivity would not be available for a generalized increase.

A similar table can be computed with the same assumptions except the new employee was added to the low productivity sector, which decreases total labor productivity to 9.87, a reduction of 1.3 per cent.

These limitations illustrated why productivity indexes were only general indicators and cannot be regarded as hard and fast rules. It was entirely possible for the index itself to introduce inflationary biases.

B. Wage Gain Measurements

1. Why include fringe benefits?

Table 7 indicates changes in the wage rate, in both per cent and cents per hour, negotiated in selected 1964 collective bargaining contracts (the list does not necessarily include the contracts analyzed in this paper). A majority of the settlements appeared to be within the suggested non-inflationary increase. In fact, the median increase for all industries studied was exactly 3.2 per cent, the figure cited in the 1964 report of the CEA. Closer scrutiny revealed these figures to refer to general changes in wage rates only, excluding fringe benefit cost increases. Yet the guide for wage adjustment stated that "the rate of increase in wage rates (including fringe benefits) in each industry should be equal to the trend rate of over-all productivity increase." (19).

Table 7 does not include fringe benefit increases. The crucial question is whether such increases should be considered. Evidently, the CEA felt "fringes" were important enough to be included in any measurement of increased earnings. Other economists were of the same opinion. Adjusting wage increases to productivity increases meant that all increases in income must fall within the limits set by increasing productivity to avoid inflation. This meant increases in costs of fringe or non-wage items as well as increases in basic wage rates for labor.

As a general principle, this contention is correct. Any claim on the goods and services that were included in the output figure used in calculating either productivity or per capita output per year was part of the "wage" of the individual concerned. This was true whether that claim was created by paying a direct money wage or by a supplementary payment or transfer of income. (43).

Fringe benefits increased in numbers and in degree. What began as a "fringe" became an essential part of the wage payment. The following sections trace this growth and attempt to show its importance as part of the wage payment and must, therefore be included when wage increases were correlated to productivity increases.

a. The growing importance of fringe benefits.

The trade union drive for fringe benefits in post war years brought a substantial change in methods of

Table 7. Changes in wage rates negotiated in selected collective bargaining settlements concluded January 1-September 30, 1964^a

Type and amount of wage-rate action	Percent of production and related workers in--		
	All industries studied	Manu- facturing industries	Selected nonmanu- facturing industries
All actions	100	100	100
No wage change	4 ₁	7 ₁	1
Decreases in wages	-	-	-
Increases in wages	96	93	99

compensation for work. Whereas, before the employee was only paid in wages for hours worked, now fringe benefit payments make up a substantial part of the employee's income. Just as the hourly wage gains have increased the average worker's propensity to consume, so have fringe benefit gains increased his propensity to consume. If the employer paid part or all of the employee's hospitalization premiums, for example, the employee had that much more purchasing power for other items. Premium payments for overtime and holiday work certainly increased the worker's paycheck and enabled him to consume or save more. Thus, fringe benefit gains were a definite increase in wages.

Fringe benefits have developed largely through collective bargaining activities on the part of the unions. Legislation was responsible for Social Security and unemployment compensation, but by and large most of the benefits were negotiated privately by unions and employers in collective bargaining agreements (1).

Under the traditional wage system, the wage earner was paid only for the number of hours he worked or pieces he produced. If he stopped working because he was ill, old, fatigued or died, his income was immediately cut off. If the plant was closed for a holiday or if the employee took a vacation income stopped too. Today, payment for many of these items was taken for granted and fringe benefit

costs have become increasingly important as part of the employee's remuneration (11). The impact of the union was strong in the fringe benefit area.

The spread of the fringes and the growing diversity of the entire system of employee compensation have been changes wrought mainly if not predominantly by unionism - directly through collective bargaining and indirectly through legislation affecting premium pay and social security benefits. Granted that in part fringe benefits are alternatives to wage increases an employer might well have conceded even without any union, the group nature of most of these benefits puts them largely in the category of provisions uniquely attainable through collective bargaining or legislation. Ordinarily, the readily replaceable individual employee is no more able to negotiate his own medical plan with the employer than to achieve a rearrangement of shift hours, if only because to concede him such benefits is normally to run the risk of extending them to the whole group, incurring costs having a scale far in excess of the marginal worth of the particular employee. (50).

The UAW, one of the leaders in the drive for fringe benefits, was credited with much of the gain in the spread of fringes in the auto industry. Without the union the present private pension systems might never have been instigated. Group life and hospital insurance plans were expanded to include management contributions through union pressure. All in all, the mark of the union's influence in this area was considerable (62). Other factors also contributed to the growth of these benefits and cannot be discounted. Certainly changing ideas about rest, relief periods, etc. to increase production helped

bring about concessions by management to the union's demand for paid holidays and vacations.

Examples of fringe benefits were pensions, insurance, escalator clauses, reduced hours, severance pay, etc. and inclusion of some of these benefits was almost universal in the 1964 contracts (see Table 8). Some contracts included all the fringe benefits listed.

Instigating or increasing benefit plans already in existence increased each year. New or revised insurance plans appeared in 46 per cent of the 1964 settlements compared with 43 per cent in 1963. The frequency of new or revised pension plans was 26 per cent, a substantial gain on the 19 per cent figure of 1963. Pension and insurance changes broke all previous records in 1964 (14).

b. Chamber of Commerce survey of fringes The Chamber of Commerce survey was made yearly and also indicated the trend toward increasing fringe benefits. According to a 1963 survey of fringe benefit costs by the Chamber of Commerce, 86 companies participating in the study since 1947 paid out 15.5 per cent of payrolls for fringe benefits in 1947, 26.4 per cent in 1961 and 28.0 per cent in 1963 (15). In this same study the average costs of fringe benefits rose to 25.6 per cent of the payroll in 1963, nonmanufacturing firms paid an average of 27.8 per cent compared to 24.2 per cent for manufacturing

Table 8. Firms contributing to other plans^a

Payments were reported for	Percentage of firms
Insurance	99
Pensions	85
Vacation	98
Holiday payment	95
Paid sick leave	54
Profit sharing	21
Christmas or other special bonuses	33.3
Employee education	15
Payments for rest period, lunch and wash-up time	64

^aSource: (15, p. 49).

costs. This average cost was 68.8 cents per man-hour, a rise of 7.2 cents since 1961.

The costs covered by the survey were: (1) legally required payments from employers for social security, unemployment compensation, and workmen's compensation; (2) employer's share of pensions, insurance, and employee meals; (3) paid rest periods, lunch periods, and wash-up time; (4) payments for time not worked, including vacations, holidays, sick leave, etc.; and (5) other items, including profit sharing payments, bonuses, and employee education (15).

The preceding table showed the percentage of firms in the survey contributing to plans other than legally required payments.

c. Bureau of Labor Statistics survey of fringe benefit costs. Another study, this one done by the BLS, reported fringe benefit costs at 23 per cent of straight-time payroll in manufacturing industries during 1962.. This percentage differed from the Chamber of Commerce study because the Chamber's survey covered a slightly longer list of fringes. The BLS study was limited to cash disbursements of employees during 1962 for (1) vacations, holidays, and other paid leave; (2) year-end, Christmas and other irregular bonuses; (3) legally-required payments for social security, unemployment compensation, workmen's compensation, and disability insurance; (4) welfare plans including insurance, pension, vacation, holiday funds, severance pay and supplemental unemployment benefits (sub) and savings plans (9). Employer expenditures for fringe benefits amounted to 56.7 cents per plant hour for production and related workers in manufacturing. A breakdown of this figure was given in Table 9.

2. Method used to measure fringe benefits in this thesis

One purpose of this thesis was to determine fringe benefit costs in order to give a more realistic answer

Table 9. Cost breakdown, 1962, (Bureau of Labor Statistics estimates on the cost in cents per plant hour of employer expenditure for fringe benefits)^a

Item	Costs (in cents)	
Paid leave		15.4
Vacation	9.1	
Holiday	5.5	
Sick	0.7	
Other	0.1	
Premium payments		10.8
Overtime, week-end and holiday work	8.6	
Shift differential	2.3	
Year end, Christmas and other irregular bonuses		1.8
Legally required insurance programs		14.8
Social security	6.7	
Unemployment compensation	5.4	
Workmen's compensation	2.5	
Other	0.1	
Private welfare plans		13.9
Life, accident and health insurance	6.9	
Pension and retirement plans	6.1	
Vacation and holiday funds	0.1	
Severance pay and sub	0.7	
Savings and thrift plans		<u>0.1</u>
	TOTAL	56.8

^aSource: (9, p. 84).

to the question of the guidepost's impact.

Any figure amounting to 24 per cent or even 23 per cent of straight-time hourly rates caused a significant difference if raised or lowered. Fringe benefits deserved

further consideration because these increases were proportionately more than increases in the hourly wage rate.

Information on actual changes in expenditures between 1959 and 1962 indicates that during this period expenditures on benefits increased proportionately more than did wage rates. From 1959 to 1962, general wage changes totaled about 20.5 cents or 8.9 percent of straight-time average hourly earnings in unionized manufacturing establishments. Combining this with the increase in actual expenditures on the major supplementary benefits that are the subject of collective bargaining the combined costs increased about 28 cents an hour or about 10 percent over the 3-year period (66).

Increases in fringe benefit costs were substantial in 1964. This created a difficult problem because no dollar and cents value was attached to them. According to the Department of Labor, Table 7 recorded only changes in the general wage rate because information was not available on the cost increase of benefits that resulted from specific settlements. However, if the cost of benefits continued to increase proportionately more than wage rates, estimating these costs must be attempted in order to ascertain the guideline's impact.

What fringes should be estimated was the first problem considered. This problem was solved by using a system limited to the employer's cash disbursements, similar to the BLS list. This was in accord with Albert Rees' analysis of which costs to measure except for the inclusion of Christmas bonuses and/or other irregular

bonuses (2).

The first step in estimating fringe benefit costs was determining the average straight-time hourly wage rate for each industry whose contract was analyzed. This rate was determined from statistics in the Monthly Labor Review with extrapolation. The transportation equipment industry was an example. The statistics (89, p. 476) recorded gross average hourly earnings to be \$3.11 for the transportation equipment industry in August 1964 and the average weekly hours were 41.6. The gross average hourly earnings included overtime which was necessary to exclude. The Monthly Labor Review recorded average hourly earnings excluding overtime for a limited number of industries (89, p. 484). The transportation equipment industry was included and the wage was \$2.97. This rate was called the average straight-time hourly wage rate in this thesis, and was the rate used to calculate increased holiday and vacation costs per employee.

However, the table recording average hourly earnings excluding overtime was very limited and it was necessary to find a way to estimate this rate for the industries not included in the table. A table (based on a 40-hour week) with adjustment factors for eliminating premium overtime payments from gross average hourly earnings (90, p. 1054) was also used to obtain the rate for the

transportation equipment industry. The resulting rate was \$2.98. Since this figure was comparable to the \$2.97 hourly earnings excluding overtime quoted above, the same table (90, p. 1054) was used to eliminate overtime for the industries studied which were not included in the table recording average hourly earnings excluding overtime (89, p. 484). Taking the automobile industry as an example, the average hourly wage was \$3.24 in August 1964 and the gross average weekly hours were 42.5 (89, p.476). The average straight-time hourly wage was calculated from the table with adjustment factors for eliminating premium overtime payments from gross average hourly earnings (90, p. 1054). This rate was \$3.08.

Increased holiday and vacation benefit costs were estimated with the average straight-time hourly wage rate. This rate was estimated in either of the above ways for each selected contract, except for the local building and construction contracts. The straight-time hourly wage rate (for journeymen) in each local building trade was obtained from a special table (91). A copy of the pertinent facts from this table was included in the following chapter (see Table 10).

It was impossible to set a definite pattern for estimating increased pension or other benefits. Many of the benefits were impossible to estimate. Individual

decisions were necessary for each contract.

Other data on fringe benefits (9) made possible the determination of the exact proportion or percentage of fringe benefit costs spent on pensions. Studies by the BLS (83) and the Chamber of Commerce (12) reported fringe benefit costs per plant hour on an industry by industry basis. The percentage figure determined was then used to calculate the estimate of current costs per plant hour for pension benefits in each contract analyzed.

Pension benefits increased in the following ways: basic pension benefit payments increased; these basic payments were payable without reduction at an earlier age; incentive supplemental payments were included (to encourage early retirement); benefits were liberalized for permanent total disability retirements and retirement under company option; new survivors benefits were added; and benefit payments to those already retired were also increased to the new basic payment level. The only clue given in the contract as to the increased cost was in how much the basic benefit payment increased. The percentage increase could be calculated and was used as a basis for the estimated cost increase. For example, if the basic benefit payment increased 50 per cent, costs were increased by that amount. Although this gave a rather indefinite cost estimate for pension increases, it

was considered an understatement of the actual cost increases because of the many other greatly liberalized portions of the plan for which no reliable estimate could be made.

Furthermore, costs of increased relief time, increased jury duty pay, increased coverage for funeral pay, more refunds for tuition payments, etc. were not included in the wage increase estimate because it was impossible to make reliable estimates. The final estimated percentage wage increase was considered low in many of the selected contracts because of the unestimated cost increases for many fringe benefit gains. These unestimated wage costs compensated for any overstatement which might have been made.

IV. RESULTS AND DISCUSSION

A. Automobile Industry Settlements with UAW

1. Contract between UAW and Chrysler Corporation

The UAW initial settlement was with Chrysler Corporation on September 9, 1964 (10). Package costs were estimated at 54 to 57 cents per hour over the three year contract term or almost 4.5 per cent each year. This estimate came from the union's claim that the settlement cost averaged 18 cents more than the company's original offer which was given a value of 35 cents by the union and 39 cents by management. This did not include any wage increases from the cost-of-living escalator clause.

The annual improvement factor continued at 2.5 per cent with a 6 cents per hour minimum the first two years and was increased to 2.8 per cent and a 7 cents per hour minimum the third year. The first year's increase was earmarked to help pay for the greatly increased fringe benefits. Union officials feel costs won't be as great as anticipated and they should get an additional deferred increase of about 2 cents per hour.

Fringe Benefit Gains:

1. The company agreed to pay the full cost of life, sickness and accident insurance which was equivalent to an increase in pay of 1 per cent. Active employees formerly

paid an average contribution of \$4.80 per month to the fund. This amounted to about 3 cents per hour.

2. Two paid holidays were added, Good Friday and the employee's birthday. The average straight-time hourly wage in the motor vehicle and equipment industry was \$3.08 (using the August 1964 statistics) or a \$49.28 total per employee for the two extra holidays.

3. Workers with a year (26 or more pay periods worked in 12 months preceding May 1 of payment year) were granted one additional week paid vacation each year. The employee may use his paid absence allowance in no less than one-half day periods for illness not covered by sickness and accident insurance, excused absence for personal business, or at the time of vacation leave absence. Forty hours calculated at the average straight-time hourly rate equaled \$123.20. This plus the \$49.28, for holiday pay amounted to \$172.48 per year, \$3.32 per week or 8.3 cents per hour.

4. Basic pension benefits increased \$1.45, from \$2.80, to \$4.25 per month for each year of service and were payable without reduction at age 62 or older. Also included were incentive supplemental payments to age 65 for certain retirements, liberalized benefits for permanent total disability retirements and retirement under company option, new survivors benefits, increased retirements

(same as basic) for those already retired, and increased credited service (military leave, employees rehired after losing seniority will regain credited service if regain seniority 36 months after loss).

As stated before the costs were difficult to estimate and had to be approached indirectly. The transportation equipment industry paid an average of 22.1 cents per plant hour for private welfare plans in 1962 (83). Table 9 of this paper indicated that 43.8 per cent of private welfare plan funds went to pensions or retirement. This percentage was calculated and 9.7 cents was the estimate of current costs per plant hour for pension benefits.

The basic benefit payment had increased 50 per cent (from \$2.80 to \$4.25) and pension costs were thus estimated to have increased 50 per cent or 4.9 cents per hour (50 per cent of 9.7 cents). There was no way of making a reliable estimate of earlier retirement costs or picking up the cost of increased benefit pay to those already retired, therefore this estimate was considered to be low.

5. Costs of increased relief time (50 per cent for employees tied to machines) will not be included, nor will the increased jury duty pay or more refunds for tuition payments. Supplemental unemployment benefits (SUB) were increased, but the cost to the company remained

at 5 cents per plant hour.

Fringe benefit costs increased an estimated 16.2 cents per plant hour the first year or a 4.4 per cent increase over the average hourly straight-time rate of \$3.08 plus the 59.8 cents for supplemental compensation in transportation equipment industry (83).

2. Contract between UAW and Ford Motor Company

This agreement was ratified November 23, 1964 and covered a three year period (40, 41). There was no across-the-board wage increase the first year, a 2.5 per cent annual improvement factor increase with a minimum of 6 cents was included for the second year. In 1966, the annual improvement factor was increased to 2.8 per cent or a 7 cents per hour minimum, also a 2 cents an hour across-the-board wage increase was granted. Quarterly cost-of-living escalation was continued, but a new formula was adopted based on the revised Consumer Price Index.

A fund was set up to adjust wage disparities in the first contract year. This was equal to 1 cent per man-hour worked.

Fringe Benefit Gains:

1. The company agreed to pay the full cost of life and sickness and accident benefits for those on the pay-rolls. This meant an immediate increase of \$3.90 to \$8.67

in monthly paychecks of participating employees. Benefits were liberalized for the final year of the contract and the company was to assume any increased costs. The employee's contributions were comparable to Chrysler employee's so this would also average out to an immediate 3 cents per hour increase in pay.

2. Two additional paid holidays were added, Good Friday and the two half holidays before Christmas and New Years were increased to full day holidays. Since the average straight-time hourly pay was \$3.08 in the motor vehicle and equipment industry, this amounted to \$49.28 per employee.

3. One additional week paid vacation was allowed subject to the same qualifications listed under the Chrysler agreement. Once again, this amounted to \$123.20 per employee and this plus the added holiday pay equaled 8.3 cents per plant hour.

4. Basic pension benefits increased to \$4.25 per month for each year of service, from \$2.80, an increase of slightly more than 50 per cent, or 4.9 cents per hour. Provisions were made for early retirement and at an increased scale until employee became eligible for Social Security. The other liberalized benefits listed under the Chrysler agreement were also included.

5. Costs of increased relief time, jury duty pay,

increased coverage for funeral pay were not included.

6. Ford workers will also get an annual bonus at Christmas ranging from \$25 to \$100 provided from funds built up from the SUB fund which has reached its maximum size. The lower limit meant a 1.2 cents per hour increased pay and was considered a low estimate of increased pay from bonuses.

Fringe benefit costs increased an estimated 17.4 cents per plant hour or 4.7 per cent under this contract the first year. Adding the 1 cents per man-hour contributed to a fund to adjust wage inequities, the wage increase was 18.4 cents or 5.00 per cent.

3. Contract between UAW and General Motors Corporation

The three year contract was entered into on October 5, 1964 (44, 13). There was no across-the-board wage rate increase the first year, but 2.5 cents an hour was provided for wage inequity adjustments. September 6, 1965 an annual improvement factor increase of 2.5 per cent (with a minimum of 6 cents) was in effect, this was raised to 2.8 per cent or 7 cents per hour minimum the third year. In addition, effective September 5, 1966 each employee was granted a wage increase of 2 cents per hour.

Fringe Benefit Gains:

1. The company agreed to pay the full cost of life, sickness and accident insurance, an immediate increase of

about 1 per cent in pay or 3 cents per hour. Liberalized benefits in the final year of the contract was another cost increase by the employer.

2. Two additional holidays were added, Good Friday and the two half-day holidays before Christmas and New Years which were increased to full days. Using the same \$3.08 straight-time average hourly wage, a figure of \$49.28 was obtained.

3. An additional week vacation was granted, subject to the same qualifications listed under the Chrysler agreement. The average straight-time hourly earning for the week was \$123.20 and this plus the \$49.23 additional holiday pay was equal to 8.3 cents per man-hour worked.

4. The basic pension benefit payment increased 50 per cent or slightly more and pension benefit costs were estimated to increase 50 per cent, or 4.9 cents per plant hour worked. This contract also provided for the liberalized pension benefits listed under the Chrysler contract.

5. Costs of increased relief time, increased jury duty pay, time off with pay for immediate family funerals (up to three days) and more refunds for tuition payments were not included.

6. The employer was to continue contributing 5 cents per plant hour to SUB. Since the fund had reached its maximum size these contributions were slated for Christmas

bonuses ranging from \$25 to \$100. The lower limit meant a 1.2 cent per hour increase.

Fringe benefits increased an estimated 17.4 cents per man hour or 4.7 per cent. The addition of the 2.5 cents for adjusting wage inequities was equal to a 5.4 per cent wage increase the first year of the contract.

4. Contract between UAW and American Motors Corporation

The UAW and American Motors Corporation contract was signed October 16, 1964 (3). No across-the-board increase was granted the first year but a wage inequity elimination fund was set up contributed to at the rate of 0.5 cents an hour by the employer. In September 1965, the 2.5 per cent annual improvement factor was continued. In 1966 this was raised to 2.8 per cent and also 2 cents per hour was added to the employee's hourly rate.

Fringe Benefit Gains:

1. The company agreed to pay the full cost of the life, sickness and accident benefits and also assume any increased costs from the increased coverage in 1966. This would parallel the Chrysler increase in take home pay, about 1 per cent or 3 cents per hour.

2. The same two holidays added in the Ford and General Motors contracts were added by this contract and would amount to the same \$29.28 additional cost to the employer.

3. An additional week vacation was granted subject to the same qualifications listed under the Chrysler agreement. Vacation and holiday pay increases were equal to an increased cost of 8.3 cents per man-hour worked.

The American Motors Corporation settlement also retained the progress sharing plan and depending on profits, the company will give 2 weeks pay, 1 week pay or not extra pay for the additional week compared to the extra week vacation pay won at the big three auto firms. A ceiling of 13.2 cents per man-hour was put on the company's liability under the profit-sharing plan. It was impossible to give a reliable estimate on this feature because the company's profits will no longer be used to finance stock distribution or fringe benefits.

4. The basic pension benefit payment increased slightly more than 50 per cent, hence pension benefit costs were estimated to increase 50 per cent or 4.9 cents per plant hour worked. This estimate did not include increased costs resulting from early retirement, liberalized benefits for permanent total disability retirements, new survivors benefits, increased payments for those already retired and increased credited service regains.

5. Increased relief time, jury duty pay, time off with pay for funerals in immediate family, and refunds for tuition payments were not included in the cost estimate.

6. The employer continued to contribute 5 cents per plant hour to SUB fund, which was to be used to provide a Christmas bonus ranging from \$25 to \$100 after the fund reached its maximum. A \$25 bonus meant a 1.2 cent per hour increase.

Fringe benefit costs increased at least an estimated 17.4 cents per man-hour worked or 4.7 per cent the first year of the contract. The addition of wage inequity elimination fund brought this total to 17.9 cents or an increase of 4.86 per cent.

From these facts, the resultant observation was that the guideposts were exceeded. The guideposts' impact was not the type to hold wage increases to the desired level.

Walter Reuther stated the output per man-hour in the automobile industry increased by an average 4.9 per cent (73). However, wage rates in the automobile industry were exceptionally high as the result of the strong bargaining position of the worker and wage-rate should have fallen short of the general guide. The general guide was the national trend rate in output per man-hour, not the productivity trend in the particular firm or industry. This meant the 3.2 per cent figure should serve as a guide to increases. The automobile settlements were thus "stretching" the guidelines.

B. Local Building and Construction Contracts

Des Moines, Iowa

1. Contract between Cement Masons Local Union No. 21 of the Operative Plasterers and Cement Masons International Association and Des Moines Construction Council, Inc.

The contract covered May 1, 1962 through May 1, 1965 and package costs were 45 cents (29). Contractors (employers) made no increased contributions to fringe benefits. The contract provided for the same six paid holidays and same provisions providing pay for 2 hours if an employee was called to work there was none. Other special conditions were also continued the same.

Wages were increased 15 cents per hour each year. Wages increased from \$3.75 per hour to \$3.90 (see Table 10) for Journeymen Cement Masons or 4 per cent the first year. The percent gain decreased a little each succeeding year.

2. Contract between Bricklayers, Stonemasons, Tilelayers and Terrazzo Workers Local Union No. 2 and Des Moines Construction Council, Inc.

The contract covered the period May 1, 1962 through May 1, 1965 and package costs to employer were 45 cents (30). The first year the wage scale was increased 15 cents per hour. The second year 15 cents per hour was contributed

Table 10. Union scales of wages, hours, and employer's payments for insurance, pension and vacation in Des Moines, Iowa building trades^a

Journeyman	July 1 1961	July 1, 1962			
	rate per hour	rate per hour	Employers' Contribution		
			Insur- ance	Pen- sion	Vacation Pay
Bricklayers	\$4.375	\$4.525	-	-	-
Carpenters	3.600	3.750	-	12.5¢	-
Cement finishers	3.750	3.900	-	-	-
Engineers-Power Equipment Operators, Building Construction:					
Heavy Equipment:					
Cranes and Shovels	3.825	3.975	-	-	-
Paving Mixers	3.825	3.975	-	-	-
Sideboom Tractors	3.825	3.975	-	-	-
Medium Equipment:					
Single-drum Hoists	3.600	3.750	-	-	-
Compressors (over 250 cu.ft. capacity)	3.600	3.750	-	-	-
Scoops and Dozers	3.825	3.975	-	-	-
Light Equipment					
Compressors (under 250 cu.ft. capacity)	3.175	3.325	-	-	-
Firemen	3.400	3.550	-	-	-
Welding Machines	3.175	3.325	-	-	-
Stonemasons	4.375	4.525	-	-	-
Structural Iron Workers	3.725	3.875	12.5¢	-	-
Tile layers	3.700	3.850	-	-	-
Building Laborers	2.875	3.025	7.5¢	-	-
Plasterer's laborers	3.000	3.150	7.5¢	-	-

^aSource: (91, p. 23).

to a Health and Welfare Plan established prior to May 1, 1963. The third year, an additional 15 cents per hour was added to wages and/or the Health and Welfare Plan. The increase amounted to 3.43 per cent the first year, 3.3 per cent the second year, and 3.2 per cent the third year. Wages increased from \$4.375 per hour to \$4.525 per hour the first year.

3. Contract between Hod Carriers, Building and Common Laborers Local Union No. 177 and Des Moines Construction Council, Inc.

The contract was effective from May 1, 1964 until May 1, 1967 (32). The first year the basic wage rate increased 15 cents per hour and the employer continued to contribute 7.5 cents per hour for each hour worked by each employee in the jurisdiction of the contract for insurance benefits. The second year the wage rate was increased 12.5 cents as it was in the third year. These figures indicated a rise from \$3.175 to \$3.325 the first year or a 4.7 per cent increase. The increase amounted to 3.8 per cent the second year. The Plasters Tenders were on a scale 12.5 cents per hour above the scale quoted. This would make the percentage gain a little less.

4. Contract between Bridge, Structural and Ornamental Iron Workers, Local No. 67 and Des Moines Construction Council, Inc.

The contract covered the period beginning May 1, 1962 and ending May 1, 1965 and package costs were 45 cents per plant hour (27). The basic wage rate increased 15 cents per hour or 3.9 per cent the first year. The following year a portion of the 15 cents per hour was to be used for pension benefits and the final year an additional 15 cents per hour was added to the wages. The wage rate May 1, 1962 was \$3.725 per plant hour plus 12.5 cents contribution to insurance benefits by the employer (see Table 10).

5. Contract between United Brotherhood of Carpenters and Joiners of America, Local Union No. 106 and Des Moines Construction Council, Inc.

The contract was a three year agreement covering May 1, 1962 to May 1, 1965 and the package cost was 45 cents per hour (28). The wage scale increased 15 cents per hour each year and the employer continued contributing 12.5 cents per hour towards pension benefits for each actual hour worked per man under the jurisdiction of the contract. This increase was approximately equal to a 4 per cent increase the first year, because the basic wage rate increased from \$3.60 to \$3.75 that first year.

6. Contract between Local Union No. 234 affiliated with the International Union of Operating Engineers A.F. of L. - C.I.O. and Des Moines Construction Council, Inc.

Package costs were 45 cents for this contract covering a 3-year period beginning May 1, 1962 and ending May 1, 1965 (26). Table 10 illustrated the classification of operating engineers and their various wage rates. Each rate increased 15 cents the first year. Another 15 cents increase was schedule for May 1, 1963, a portion or all of which could be used to set up a mutually agreed upon pension plan or Health and Welfare plan. An increase of 15 cents was granted the last year, a portion or all of which could also be used for the pension or Health and Welfare plan.

The heavy equipment engineers wage rate increased from \$3.825 to \$3.975 per hour or 3.9 per cent the first year. Medium equipment wage rates increased from \$3.60 per hour to \$3.75 or about 4 per cent. Small equipment rates increased from \$3.175 to \$3.325 per hour or 4.7 per cent the first year of the contract.

7. Contract between Local Union No. 90, affiliated with the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America and Des Moines Construction Council, Inc.

This contract was ratified May 1, 1962 and was in effect until May 1, 1965 (31). Wage rates were increased 14 cents each year. In addition the employer's contribution to health and welfare benefits was increased from \$3.00 to \$3.50 per week for each employee on May 1, 1963. Fringe benefit costs were increased 16.66 per cent and it amounted to an increase of 1.25 cents per hour.

Wage rates increased from \$2.92 to \$3.06 per hour for truck drivers and the amount to a 4.6 per cent increase. Semi-driver rates increased from \$3.02 to \$3.16 per hour or 4.5 per cent. Truck helpers, yardmen, teamsters, tire repairmen, etc. wage rates increased from \$2.87 to \$3.01 per hour the first year of the contract. This was a 4.7 per cent increase (the hourly cost of fringes was added to the hourly rate when calculating the percentage). The second year the increase was a comparable 4.8 per cent for truck drivers.

The wage increases in the local building contracts were more than the noninflationary wage guide of 3.2 per cent advocated by the guideposts. The increases ranged from 3.4 per cent to 4.8 per cent. Only one settlement was close to the guides established by the CEA and this was for the highest paid craft, the brick layers. The wage rate increase was no less for this industry, but since the rate was already so high, it only amounted to a

3.4 per cent increase. The other crafts all exceeded the guidelines, the increases ranged from 3.9 per cent to 4.8 per cent. Higher percentage increases appeared in the lower paid crafts. The formal guideposts were apparently no more effective in holding wage increases to the overall trend rate increase in productivity than exhortations from the White House in previous years.

C. Contract between International Chemical Workers Union, Local No. 81 and Monsanto Company
(Carondelet Plant)

The contract was signed July 10, 1964 and covered a two year period ending July 1, 1966 (67). Effective July 1, 1964 job classification rates and individual rates were increased by 9 cents per hour and effective July 1, 1965 the increase was 8 cents per hour. Hourly wage rates ranged from \$2.75 for a laborer to \$3.36 for stationary engineers (probationary labor wage rate was not used to calculate gains) and the 9 cent gain was equal to 2.7 per cent increase for the top of the scale and 3.2 per cent gain for laborers using the hourly wage rates alone. Table 9 gave estimates of costs in cents per plant hour of employer expenditure for fringe benefits. The contract provided vacation, holiday and sick paid leave and premium payments. Adding these costs to the hourly rate reduced the percentage gain to 2.4 per cent and

3 per cent respectively.

The only increase in fringe benefits was increasing the meal allowance from \$1.25 to \$1.50. The meal allowance was granted any employee after working 10 continuous hours. It was impossible to make a reliable estimate of these costs and probably not worthwhile.

Wage gains were well within the general guide set up in the Economic Report of the President.

D. Settlements with International Union of
Electrical, Radio and Machine Workers,
AFL-CIO (IUE)

1. Agreement between Sylvania Electronics System and IUE
Local 511.

This agreement was signed August 31, 1964 and remained in effect through August 31, 1967 (85). Hourly increases of 7 cents were included, effective August 31, 1964. The hourly rates before the increase ranged from \$2.02 to \$3.07. Average hourly earnings excluding overtime for the electrical equipment and supplies industry was \$2.44 in August, 1964 (89, p. 484). Additional hourly increases of 6 to 14 cents were contracted to become effective February 28, 1966.

Average expenditures for selected fringe benefits in the Electrical Machinery, Equipment and Supplies industry

were 19.1 cents per hour for paid leave, 13.8 cents for premium pay and 15.8 for private welfare plans (12). These expenditures totaled 48.7 cents per hour and when added to the average straight-time hourly rate, the value was \$2.93. Supplementary or fringe benefit gains included:

1. The addition of a ninth paid holiday, valued at \$19.52 per employee.

2. A 4 weeks vacation was scheduled after 20 years rather than 25 years of service, but it was impossible to make a reliable estimate of this cost without further information.

3. Liberalized early retirement benefits were provided together with an improved insurance program for retirees. Also, increased maximum sickness and accident benefits and improvements in the hospital, surgical and medical plans were provided. How much these improved benefits would cost the employer was impossible to detect from the contract or other statistics, but the current 15.8 cents per hour cost for private welfare plans will probably increase.

The first year across-the-board increase of 7 cents plus the increased holiday pay were equivalent to a 2.7 per cent wage increase. However, no decision as to the guideposts impact was made, because it was impossible to estimate the cost of the improved supplemental benefits.

2. Agreement between the Batavia Plant of Sylvania Electric Products, Inc. and IUE Local 352

Essentially the same as the agreement described above, this contract was dated October 1, 1964 and expires September 30, 1967 (84). The same increases were granted and the same indefinite conclusion was made.

3. Agreement between Westinghouse Electric Corporation and IUE

A three year contract was ratified October 26, 1963 (92). Hourly wage rates increased 6.5 cents immediately. In addition, 5 to 10 cents (7 cent average) increase was negotiated for April 19, 1965.

Increased Fringe Benefits:

1. Insurance benefits were greatly increased. The maximum for special hospital services increased by one-half (\$200 to \$300), \$25 was allowed instead of \$22 hospitalization per day for 180 instead of 120 days, maximum surgical allowance was increased \$10,000 from \$7,500, major medical maximum for a single illness was increased to \$20,000 from \$15,000, one-third instead of one-fourth life insurance benefit was retained after retirement with \$2,500 minimum instead of \$2,000 and maternity benefit coverage was extended to cover the infant. These benefits were increased by one-fourth, one-third and one-half and

emergency hospital coverage after accident increased from 24 hours to 72 hours (quadrupled). If costs were estimated to increase by one-fourth, the smallest increase in benefits, 2 cents would be a 25 per cent calculated increase. This was calculated from the 15.8 cents per hour allocated to private welfare plans in the electrical equipment industry. Table 9 indicated, life, accident and health insurance plans were an estimated 50 per cent of private welfare plan funds and 25 per cent of almost 8 cents was approximately 2 cents.

2. Revised pension plans provided unreduced benefits for early retirements, increased benefits for 10 year employees retiring at age 60 to 65 (\$3.00 instead of \$2.40 per month per year of past service prior to April, 1962) non-contributory benefits and more than 5 per cent increases in future service benefits for employees who contributed to their pension with no increase in the rate of employee contribution. There were also increased disability pension benefits and monthly pension.

3. Three week vacation was granted after 10 years (was 15 years) and an additional day's vacation per year of service after 16 years to 20 years.

4. The lay off income and benefits plan started in 1960 were liberalized. Weekly payments were raised to 60 per cent of weekly pay from the former 50 per cent and

waiting periods were eliminated.

However, no estimate was possible on most of the increased fringe benefits under this contract. The wage increase was 2.9 per cent, using the 6.5 cent basic hourly rate increase plus the estimated 2 cents increase in insurance benefit costs. Again no decision was made on whether the contract complied with the guideposts because many wage gains were obtained in fringe benefits, but no estimations were possible of the increased costs.

E. Contract between UAW and John Deere Waterloo Tractor Works

This three year contract was ratified October, 1964 (53). No increase in wages was granted the first year. October 1, 1965 the 2.5 per cent annual improvement factor or a 6 cents per hour minimum was continued and this improvement factor was raised to 2.8 per cent or 7 cents per hour minimum the following year. Cost of living allowances, 2.5 per cent of the current 4 per cent, were incorporated into the wage rates. Fringe benefit gains were similar to those outlined under the Chrysler contract.

1. Two additional holidays were added, the day after Thanksgiving and New Year's Eve day, also an additional 40 hours annual leave was granted. Average hourly earnings (August 1964) for Farm Machinery and Equipment were \$2.88

(89) and average hourly straight-time earnings was calculated as \$2.77 (90). Additional cost per employee for added holidays and annual leave was \$165.12 or 7.9 cents per plant hour.

2. The company agreed to pay the full cost of life, sickness and accident insurance, an immediate increase of 1 cent in pay or 3 cents per man hour. Life insurance minimum was increased from \$2,500 to \$6,000.

3. Pension benefits were similar to Chrysler Corporation in improvements and increased costs were estimated the same 50 per cent. Pension benefits were estimated as 6.9 cents per plant hour and 50 per cent increased cost was 3.5 cents per plant hour.

Costs, where estimates could be made, increased 14.4 cents per plant hour or 4.4 per cent the first year of the contract over the average hourly straight-time rate of \$2.77 plus the 48.7 cents for supplemental compensation in the machinery industry (10). The rate of wage increase exceeded the general guide.

F. Contract Negotiations in the Steel Industry

Negotiations for a steel contract were not completed at the time of this writing and although the contract was not available for investigation, there were aspects in this controversy which deserve attention. The controversial

struggle between the steel industry and the United Steelworkers Union focused attention on the guidepost issues in 1965. Many of the issues exposed in this thesis were fully illustrated in the steel struggle.

The alternative ways of defining and measuring productivity were illustrated. Management maintained (Roger M. Blough, board chairman of U. S. Steel Corp.) the productivity increase since 1957 averaged only 2 per cent (82), while a study of the CEA reported 3 per cent (69). The unions quoted the guidepost figure of 3.2 per cent increase and were holding out for a wage increase of that amount, whereas the companies took the position of not increasing labor costs by more than 2 per cent. Gains for labor under the 1962 and 1963 contracts as calculated by labor were below the 3.2 per cent. Union officials said the 1962 contract raised employment costs 2.5 per cent annually and the 1963 pact about 1.8 per cent annually. This year union officials felt a larger gain was forthcoming.

This impasse was temporarily solved until September 1, 1965 by an interim wage agreement for an increase of 11.5 cents an hour representing about a 2.7 per cent raise (82).

One objective of the guidepost making the public more aware of wage bargain significance and consequences was met. The news media carried many reports focusing public

attention on guidepost philosophy. Union and management officials were stressing the importance of productivity increases and the differences in measuring these increases. In this area, the guideposts were making an impact.

V. CONCLUSIONS AND SUMMARY

Public officials have been interested in halting inflationary trends in the United States since the early 1950's. The blame for rising wages and prices was often placed on strong unions pushing up prices with high wage demands. This resulted in government officials admonishing union and business leaders to make "responsible" wage decisions. A non-inflationary increase in wages was considered a "responsible" decision. Gearing specific wage increases to national productivity trend rate increases was regarded as an acceptable contribution to the inflationary problem. The CEA's 1962 wage-price guidelines attempted to formalize criteria and boundaries for wage and price increases. The annual trend rate of national physical productivity increase per man hour was the principal guideline.

The problem in defining and measuring productivity arose in the input measure. Deciding what should make up the input function was difficult because of diverse opinions on what should be included as inputs. The index ultimately used in evaluating the contracts was the one used by the CEA, the output per unweighted man-hour measure. The greater ease of computing labor productivity and the greater accessibility of reliable statistics favored the labor productivity measure. Another advantage to using the CEA's suggested productivity measure was that any contract

evaluation of the guideposts' impact was made on the CEA's interpretation of productivity.

Estimations of fringe gains have been made conservatively to compensate for areas which do not include all employees. The absence of reliable statistics made it impossible to estimate fringe benefit gains in some instances.

Results of the contract examinations, the estimated wage gains are summarized in Table 11. Most wage increases can properly be regarded as underestimated in terms of CEA criteria because many increases in fringe benefit costs could not be estimated.

The general guide is the national trend rate in output per man-hour, not the productivity trend in the particular firm or industry. It was estimated as 3 per cent in 1962 by the CEA. In 1964 and 1965, 3.2 per cent was the CEA estimated figure. Table 11 indicates that most of the contracts examined exceeded the 3.2 per cent figure. The percentage changes for each previous in total compensation per man-hour has been reported in Table 3 (p. 41). However, it is impossible to make valid comparisons on the rate of change in these increases because Table 11 is for the selected contracts examined only and Table 3 represents the entire economy. Furthermore, such a comparison would necessarily involve many other variables such as market conditions, the unemployment rate, etc.

Table 11. Estimated percentage increase for contracts examined

Contract	Percent increase
UAW-Chrysler Corporation (Sept. 1964)	4.4
UAW-Ford Motor Company (Nov. 1964)	5.0
UAW-General Motors Corporation (Oct. 1964)	5.4
UAW-American Motors Corporation (Oct. 1964)	4.9
UAW-John Deere Waterloo Tractor Works (Oct. 1964)	4.4
Cement Masons Local No. 21 - Des Moines Construction Council, Inc. (April, 1962)	4.0
Bricklayers Local No. 2 - Des Moines Construction Council, Inc. (April, 1962)	3.4
Hod Carriers Local No. 177 - Des Moines Construction Council, Inc. (May, 1964)	4.7
Iron Workers Local No. 67 - Des Moines Construction Council, Inc. (April, 1962)	3.9
Carpenters Local No. 106 - Des Moines Construction Council, Inc. (April, 1962)	4.0
Operating Engineers Local No. 234 - Des Moines Construction Council, Inc. (April, 1962)	4.0
Teamsters Local No. 90 - Des Moines Construction Council, Inc. (May, 1962)	4.6
International Chemical Workers Local No. 81 - Monsanto Chemical Co. (July, 1964)	2.4-3.0
IUE - Sylvania Electronics System (Aug. 1964)	No reliable estimate possible. 2.7 plus fringe increase
IUE - Sylvania Electric Products, Inc. (Oct. 1964)	No reliable estimate possible. 2.7 plus fringe increase
IUE - Westinghouse Electric Corporation (Oct 26, 1963)	No reliable estimate possible. 2.9 plus fringe increase

It is not too surprising that Table 11 shows wage gains exceeding the guideposts. The AFL-CIO Executive Council, at its May, 1964 meeting, declared in a resolution that, "we reject completely the concept that the national productivity rate is the only factor in collectively bargained wage levels." The Council said that wages, hours and working conditions must be on a "union-by-union, company-by-company, and industry-by-industry basis" (46).

However, the very fact that such a resolution was deemed necessary indicates a consciousness of the guideposts. A major CEA objective is to make the public more aware of wage-price decisions and their economic significance and consequences. Certainly the guideposts are having some educational impact in this area. Labor and management are not ignoring them and are even led to publishing resolutions like the one quoted above.

The current wage negotiations in the basic steel industry are another illustration that the object of making the public more aware of the economic impact of wage decisions is being achieved. News media are reporting the steel negotiations with the guidelines as criteria for discussing the economic content of the negotiations.

The results summarized in Table 11 indicate wage increases are exceeding the suggested 3.2 per cent guidepost boundaries. Furthermore, if the qualifications and modifi-

cations proposed by CEA were to be considered, a number of the increases shown in Table 11 should have been below the general guide of 3.2 per cent because the wage rates are already exceptionally high for the industry or area in question. Reference here in particular is made to the contracts in the automobile industry and some contracts in the building industry.

Conclusions here must necessarily be limited to the contracts studied. It is entirely possible that had other contracts been selected the results would have been different. The guideposts may be having a definite impact in the psychological area. Their presence may be making an impact, even on the negotiations where they are exceeded. They may be having an impact on what is being demanded and on the content of the eventual settlement. This is impossible to measure, but we do know the public, labor and management are aware of their presence.

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