

The Causes and Consequences of Structural Changes in U.S. Labor Markets: A Review

by Randall W. Eberts and Erica L. Groshen

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Introduction

Despite apparently tight labor markets, wage inflation in the late 1980s was much lower than most observers anticipated. *The Wall Street Journal* quoted one noted economist as saying, "The most interesting phenomenon in the United States today is the existence of enormous labor shortages in some areas accompanied by no upward pressure on wages."¹ The article went on to state that the reasons for this phenomenon challenge the assumptions about the relationship between wage changes and general price changes that we formed during the 1960s and 1970s.

Several explanations were offered at that time for the slow nominal wage growth seen during the second half of the decade. Chief among the factors cited by labor-market analysts and the media was a reversal in labor-management psychology about wage increases, brought on in part by slow productivity growth, a severe economic downturn, and increased foreign competition. The common perception was that during the 1970s, workers, with the consent of management, felt entitled to automatic wage increases that were at least in line with inflation. The

demand for "3 percent plus cost of living" was a common refrain around many negotiating tables. This mind-set evaporated as workers suffered massive job losses during the twin recessions of the early 1980s, and as managers faced mounting foreign competition that eroded U.S. firms' market share and placed downward pressure on domestic prices. Instead of focusing on wage increases, negotiations became centered on wage concessions in exchange for job security.

In addition to a change in the psychology of wage-setting behavior, institutional changes were also cited as possible causes of sluggish wage growth. Mitchell (1989), in comparing the wage pressures of the 1980s with those of the 1960s, concludes that recent changes in labor-market institutions have pushed wage-setting in a more competitive direction. With the declines in the proportion of workers in the union sector and in big firms, jobs are less likely to be cushioned from labor-market forces by union contracts and bureaucratic personnel practices.

Changes in demographics, particularly the greater participation of women in the labor force, were also said to figure into the moderate wage growth witnessed during the 1980s. To the extent that women are less attached to the labor force than are men, they may provide a

■ 1 See Uchitelle (1987).

TABLE 1

**Economic Conditions
in Previous Decades**

Condition	1960s	1970s		1980s	
	Expansion Quarters ^a	Recession Quarters ^b	Expansion Quarters	Recession Quarters ^c	Expansion Quarters
Average annual percentage change in:					
Average hourly earnings, private business sector	5.21	6.93	7.38	7.66	3.39
Compensation per hour index	6.36	9.01	8.35	9.10	4.26
Consumer Price Index	3.41	8.45	6.94	10.04	3.68
Output per hour, private business sector	2.41	-0.38	1.82	0.18	1.70
Real GNP, 1982 dollars	4.21	-0.18	3.47	-0.25	3.65
Average level of:					
Unemployment rate	4.06	5.37	6.42	8.17	7.02
Unemployment rate, male, age 25 and up	2.31	2.99	3.78	5.81	5.39
Capacity utilization	87.80	80.99	80.78	75.93	79.99

a. 1961:1Q to 1969:4Q.

b. 1970:1Q to 1970:4Q and 1973:4Q to 1975:1Q.

c. 1980:1Q to 1980:4Q and 1981:1Q to 1982:4Q.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; and Board of Governors of the Federal Reserve System.

buffer by filling vacancies during tight labor markets and by leaving the labor force during slack periods.

The questions facing policymakers and analysts during this period were twofold: What was really behind the apparent change in wage behavior, and was the shift permanent or temporary? In October 1989, the Federal Reserve Bank of Cleveland sponsored a conference on the causes and consequences of structural changes in U.S. labor markets. Several prominent labor economists were asked to provide a careful and comprehensive analysis of some of the important developments that took place during the 1980s. The research focuses on a range of labor-market behaviors and industrial relations practices that could explain the macroeconomic relationship between unemployment and wages, and also on the effects of this relationship on output and employment stability. Four of the six papers deal with alternative compensation practices (fringe benefits and lump-sum and profit-sharing payments) and the structure of union contracts. The remaining studies examine how changing labor-force demographics and increased pressure from international competition have affected wages.

I. Comparisons across the Last Three Decades

Was wage behavior different during the 1980s than in the preceding two decades? This brief section argues that this may indeed have been the case. Many analysts have noted that nominal wage growth during the expansions of the 1980s fell far short of that experienced during the upturns of the 1970s and even of the 1960s (table 1). And the same relatively low growth rates are also evident for the broader measure of compensation per hour, which includes fringe benefits, a growing component of employee compensation.

This sluggish response alone might tempt one to conclude that fundamental changes in the structure of wage determination and worker compensation during the 1980s dampened the upward pressure on wages. However, leaping to that conclusion ignores differences in economic conditions across the past three decades. Although observers in the 1980s generally perceived labor markets to be extremely tight (particularly during 1988 and early 1989), typical measures of labor-market tightness do not support this view. In fact, the minimum unemployment rate during the expansions of the 1980s

TABLE 2

Explaining Annual Percentage Changes in Nominal Average Hourly Earnings

	1960s	1970s	1980s
Intercept	0.465 (0.63)	6.022 (7.43)	0.473 (2.11)
Consumer Price Index ^a	0.887 (2.07)	0.082 (1.18)	0.325 (5.70)
Unemployment rate ^b	-0.018 (-1.74)	0.027 (1.84)	0.051 (6.09)
Capacity utilization rate ^b	0.045 (0.63)	0.150 (2.66)	0.142 (6.19)
Labor productivity ^b	0.286 (2.07)	-0.221 (-2.70)	0.002 (0.03)
GNP implicit price deflator ^b	0.271 (0.77)	0.138 (1.12)	0.498 (5.60)
Recession ^c	-0.387 (-1.10)	-0.674 (-1.80)	-0.138 (-0.43)
R^2	0.89	0.52	0.99

a. Year-over-year change, lagged one quarter.

b. Year-over-year change.

c. Variable equals one for quarters marked by recession.

NOTE: Observations are quarterly, and percentage changes are year over year. Separate regressions were run for each decade. T-statistics are in parentheses.

SOURCE: Authors' calculations.

(5.2 percent) was *higher* than that of the upturns of the previous two decades (3.4 percent during the 1960s and 4.8 percent during the 1970s). Moreover, the maximum rate of capacity utilization was lower in the 1980s expansions (84.4 percent) than during those of the 1960s and 1970s (91.6 percent and 87.3 percent, respectively). Thus, it is not clear whether the slow wage growth of the 1980s stemmed from structural changes in wage-setting practices or simply from differences in business conditions.

One way to partially disentangle these effects is to ask the conceptual question, What would have happened to wages if the expansions of all three decades had shared the same economic conditions and differed only in the relationship between wages and changes in the economic environment? We use a simple econometric technique to estimate the wage behavior separately for each of the last three decades. These estimates, which summarize the link between wages and economic conditions in each decade, are then used to simulate the net nominal wage change

that would have taken place if wages had responded to similar conditions.

We follow a variant of the wage-change model used recently by Wachter and Carter (1989) and earlier by Gordon (1982).² Annual changes in average hourly nominal earnings are explained econometrically by annual changes in the unemployment rate, capacity utilization, labor productivity (measured by output per hour), the GNP implicit price deflator, and the Consumer Price Index (CPI, all items for urban workers).

Other specifications of the wage-change model are possible, and many have been posited. Our simple five-variable specification is based on the premise that wages reflect both pressures in the labor market and inflation expectations. We use the CPI to measure expected price inflation. Changes in the unemployment and capacity utilization rates are assumed to proxy for shifts in the tightness of labor and product markets. Labor productivity changes measure workers' contribution to production and, consequently, employers' ability to grant higher wages. And finally, the GNP implicit price deflator captures shifts in producer prices, which also reflect employers' ability to pay higher wages.

We estimate these relationships separately for each decade using quarterly observations. We also include a variable that takes the value of one during quarters marked by national recessions to account for business-cycle effects.

Because our main purpose is to demonstrate wage behavior under similar economic conditions, we do not dwell on the estimates of individual coefficients. Nevertheless, we note that most of the variables in table 2 appear to have the expected effect on nominal wage changes: Higher nominal wage increases are generally associated with stepped-up inflation expectations, increased capacity utilization, labor productivity gains, and higher producer prices. Although the positive relationship between changes in nominal wages and unemployment rates in the 1970s and 1980s is perhaps surprising, it is consistent both with periods of stagflation during the earlier decade and with the long, gradual recovery of the 1980s, when wage and price increases moderated and unemployment fell.

The net effects of these differences in the relationship between nominal wage changes and changes in economic conditions are shown

■ 2 We present this specification simply as an illustration of the changes sensed by analysts and practitioners during the 1980s. Individual coefficient estimates from this exercise should be interpreted cautiously because of the short time periods involved.

TABLE 3

**Simulations of Annual
Nominal Hourly
Earnings Changes**

Explanatory variables (economic conditions)	Structure (relationship between conditions and wages)		
	1960s	1970s	1980s
1960s	5.41	6.17	3.65
1970s	9.52	7.51	6.97
1980s	6.43	6.65	4.24

NOTE: The values are the average annual percentage changes in nominal hourly earnings during the decade. Simulations were performed by multiplying the explanatory variables for a given decade by the coefficients for the appropriate decade. The values on the diagonal (that is, for the same decade) are identical to the actual annual wage changes.

SOURCE: Authors' calculations using estimates from table 2.

in table 3. The bottom row is of primary interest. The first entry in that row is the average annual nominal wage change that would have taken place in the 1980s if labor had had the same relationship to economic conditions then as in the 1960s. In this hypothetical case, wages would have increased an average of 6.43 percent annually in the 1980s. Subjecting the wage behavior that prevailed during the 1970s expansions to 1980s economic conditions yields a slightly higher annual growth rate of 6.65 percent. Both of these figures substantially exceed the 4.24 percent average annual increase that actually took place during the 1980s.

It is also interesting to note that if wages had had the same relationship to economic conditions during the 1960s as they did in the 1980s, wage growth would have been considerably lower in the earlier decade than it actually was (3.65 percent versus 5.41 percent). The same holds true for the 1970s. The actual annual wage increase was 7.51 percent, compared with 6.97 percent when the 1980 wage structure is used.

This simple analysis suggests that something dampened the relationship between wages and economic conditions during the 1980s, such as changes in unemployment rates and in price levels. The papers summarized below explore the various shifts that have taken place and consider their implications for both wage behavior and the performance of the U.S. economy.

II. Why the Slow Wage Growth in the 1980s?

The explanations explored at this conference for the slow wage growth of the 1980s can be grouped around three phenomena: increased international competition, changes in wage-setting practices, and demographic shifts.

Increased International Competition

The first category considers increased competition within product markets, particularly that resulting from greater penetration of foreign imports into U.S. domestic markets. Under this scenario, pressures to keep prices in line with those of foreign competitors would moderate wage increases.

Susan Vroman and Wayne Vroman address this issue in "International Trade and Money Wage Growth in the 1980s." Their focus on international trade as a significant contributor to sluggish wage growth is well supported by the events of the 1980s. The U.S. economy has become increasingly open to foreign trade with respect to both imports and exports. As imports further penetrate our product markets, one would also expect labor markets to become more competitive, constraining domestic nominal wage growth.

The authors present two sets of estimates to test this hypothesis. The first is based on a time-series analysis of a modified Phillips curve, which shows the trade-off between nominal wage growth and unemployment. The second is based on a longitudinal study of more than 2,000 collective bargaining agreements in the manufacturing sector between 1959 and 1984. Both sets of estimates show that developments in international trade in the 1980s contributed to the slowdown in money-wage inflation, with nonpetroleum import prices and real nonpetroleum import share registering the most significant effects. The authors are quick to point out, however, that international trade accounted for only a small part of the slowdown, at most 18 percent in selected years. This contribution would have been even less significant for the private business sector as a whole, since international trade should have the largest impact on manufacturing, a sector that directly involves only one-fifth of U.S. workers.

Vroman and Vroman place the estimated trade effect into perspective by exploring other possible explanations for the modest wage growth of the 1980s. Most important among these

are inflationary expectations and the composition of unemployment. The authors conclude that, of the factors considered, the reduction in inflationary expectations during the latter half of the decade was the primary factor in the slower nominal wage growth. The unusually high rate of unemployment among prime-age males was also found to exert a restraining effect on money-wage growth, equaling the impact of international trade.

Changes in Wage-Setting Practices

The second class of explanations relates to institutional changes in wage-setting practices. These include alternative forms of compensation, such as lump-sum payments, profit sharing, and fringe benefits. Also covered are changes in the structure of labor union contracts, such as contract duration, cost-of-living indexation, and the emphasis on job security over wage growth.

As documented below, workers have increasingly received compensation in forms other than cash wages. For instance, the percentage of workers receiving lump-sum or profit-sharing payments has risen over the last decade. Fringe benefits as a share of total compensation has also increased, although a slightly smaller proportion of workers are now covered by pensions and health care benefits—the two largest components of this form of payment. Moreover, the prevalence of cost-of-living indexation fell during the 1980s, while contract length grew. A theme shared by all four papers summarized in this section is that developments in wage-setting processes may have reduced the trade-off between wage inflation and unemployment.

Lump-Sum Payments. In “Lump-Sum Payments and Wage Moderation in the Union Sector,” Linda Bell and David Neumark examine the growth of lump-sum payments in union firms in an effort to determine whether the spread of this alternative compensation arrangement contributed to the decline in wage growth during the past decade. Lump-sum payments can reduce wage inflation in at least three ways. First, they may signal a change in the labor-management environment toward either a strengthened management stance or a worker preference for that form of payment. Second, they may simply reflect an accounting change as certain labor costs are shifted out of wages and salaries and into other forms of compensation. Third, they may increase labor-market flexibility by tying compensation more directly to worker productivity and to firm profits. Profit sharing provides employers with a

method for responding to shocks in the product market beyond simply adjusting employment. Since profit-sharing payments are not counted as part of an employee’s base salary, adjustments in either direction can be made quickly in response to changing business conditions. This increased flexibility has led some economists, including Weitzman (1986), to advocate profit sharing as a means of stabilizing employment and output.

To analyze these effects, Bell and Neumark examine more than 5,000 contracts negotiated in 1,200 private-sector establishments between 1975 and 1988. Within this sample, they find a dramatic jump in the number of contracts with lump-sum payment provisions. Indeed, between 1983 and 1984, the proportion of workers signing such contracts skyrocketed from 5.9 percent to 69.5 percent! The authors present evidence that this surge resulted from unions’ preference for this alternative form of compensation.

Applying the Phillips-curve framework to the trade-off between nominal wage increases and unemployment, Bell and Neumark find that the prevalence of lump-sum payments is associated with reduced wage growth. They estimate that a 10-percentage-point rise in the share of workers covered by lump-sum contracts pushes the annual rate of wage inflation down 0.3 to 0.4 percentage point. The authors then reject all but one of the aforementioned explanations for this dampening effect. They dismiss the accounting explanation of a shift from base wages by showing that lump-sum payments also reduce the percentage increase in firms’ total labor costs. Likewise, they find little support for the flexibility explanation. In fact, their estimates are inconsistent with the hypothesis: Firms offering lump-sum payments exhibit *less* labor-cost flexibility in response to changes in demand for their products. The authors conclude that the labor-management environment must have changed during the 1980s.

Profit Sharing. Douglas Kruse explores the effect of a second form of nonwage payment—profit sharing—on wage growth. In “Profit Sharing in the 1980s: Disguised Wages or a Fundamentally Different Form of Compensation?” he points out that even this somewhat narrow type of compensation takes several different forms, including profit-related bonuses, deferred pension plans, or some combination of the two. Results of his study show a steady growth in deferred profit sharing, as the percentage of the private wage and salary work force with such coverage rose from 13.3 percent in 1980 to 18.4 percent in 1986. Although this still represents a relatively small share of the total labor force, the covered workers appear to be concentrated in industries

that have historically demonstrated downwardly rigid wage behavior, such as manufacturing.

Kruse concentrates on increased labor flexibility to explain the negative relationship between profit sharing and wage growth—a relationship that is similar to the one between lump sums and wages described by Bell and Neumark. He reviews the empirical literature on the connection between profit sharing and employment stability and finds little agreement among the studies.

Kruse also pursues his own empirical test using deferred pension plans as a measure of profit sharing. His analysis yields some support for the position that firms do not view profit-sharing payments as part of the short-run cost of labor, but rather as a distribution of profits to labor after other costs (including base labor costs) have been taken into account. In this way, a company's employment decisions are not influenced by profit-sharing payments, since these are not considered part of base wages. For 586 publicly traded U.S. companies, Kruse notes little trade-off between higher profit-sharing payments and employment. On the other hand, he does find the expected trade-off between base wages and employment. The author concludes that profit sharing is not simply "disguised wages," but a more flexible form of employee compensation.

Fringe Benefit Coverage. In "The Decline of Fringe-Benefit Coverage in the 1980s," Stephen Woodbury and Douglas Bettinger suggest that compensation became more flexible during the last decade because a lower percentage of workers received employer-based health insurance coverage and pension plans. The share of workers included in employer-provided pension plans dropped from 60 percent in 1979 to 55 percent in 1988. During the same period, the percentage of workers covered by employer-provided group health insurance plans shrank slightly, from 74 percent to 72 percent. As a result, the ratio of employer costs for these two fringe benefit packages to wages and salaries edged down. These statistics suggest that the moderate wage growth in the 1980s was not necessarily due to large offsetting increases in benefit coverage. However, the reduced coverage may have led to more flexible compensation.

Woodbury and Bettinger's primary purpose is to provide a detailed analysis of the determinants of fringe benefit coverage. They conclude that the decline in coverage during the 1980s resulted both from the decrease in marginal tax rates on personal income during the middle of the decade and from the steady drop in union representation throughout the decade. Dwindling manufacturing employment, shifts in occupa-

tional mix, and aging of the work force had little to do with the decrease in coverage, according to the authors.

The most significant determinant was the lowering of marginal tax rates in 1986, which induced workers to trade fringe benefits for increased wages. However, their willingness to substitute wages for fringes was not uniform across all types of voluntary benefits. Woodbury and Bettinger estimate that workers were more willing to trade wages for employer-provided pensions than for employer-provided health coverage. The authors interpret the decline in benefit coverage as a tendency for a reduction in the fixed component of worker compensation, which can be seen as a move toward a more "spot market" type of pay.

Union Contracts. Wage moderation in the 1980s was disproportionately concentrated in the union sector, which experienced lower wage growth in the latter half of the decade (14.2 percent) than did the nonunion sector (23.9 percent). In contrast, in every year between 1976 (when data first became available) and 1982, union wage hikes outpaced nonunion wage changes. After 1982, when the economy began to recover from the high unemployment brought on by the twin recessions that inaugurated the decade, many unions placed job security above wage growth as the top priority in their bargaining rounds. This reordering is certainly evident in unions' nominal wage increases.

In "Indexation and Contract Length in Unionized U.S. Manufacturing," Mark Bils examines two changes in the structure of labor contracts that could have led to slower wage growth in the union sector: reductions in indexation and shorter contract length. For all union contracts settled in the private sector, the proportion of workers with inflation escalator clauses fell from an average of 55.2 percent between 1980 and 1983 to 36.8 percent between 1984 and 1988. However, the length of contracts remained the same over the decade, averaging slightly more than 31 months.

An extensive body of theoretical literature supports the view that the length of contracts and the inclusion of indexation reflect the degree of uncertainty facing workers and employers. To explore this proposition, Bils examines a detailed longitudinal set of major collective bargaining agreements reached between 1955 and 1985 in the manufacturing sector. His results contradict the generally accepted prediction that increased uncertainty will shorten contracts. Rather, he finds that contracts are *longer* in industries that face *more* uncertainty (durable goods, for example). Bils suggests that these results are consistent with

the notion that longer contracts are written in order to reduce strikes.

With respect to indexing, he finds that the percentage of contracts with cost-of-living escalator clauses is positively related to increases in both inflation and inflation uncertainty. This is consistent with the generally accepted view that escalator clauses protect workers from unanticipated price-level changes. Consequently, consumers' lower inflation expectations during the latter half of the 1980s could explain the lower nominal wage growth at that time. This finding is in accord with Vroman and Vroman's results.

Demographic Shifts

In "Gender Differences in Cyclical Unemployment," Sanders Korenman and Barbara Okun consider the effect of female participation in the work force on cyclical unemployment. It may be that women provide a pool of workers who move freely into and out of the labor force (depending on the stage of the business cycle), since they are historically less attached to it than are men. Such a procyclical participation pattern of a large group of workers would weaken the effectiveness of unemployment rates as a measure of labor-market tightness. Consequently, fluctuations in wages and in standard measures of unemployment rates associated with business cycles would be dampened.

The major issue that Korenman and Okun explore, therefore, is whether women are indeed less attached to the labor force than are men. Their analysis shows that although women are still less attached, their connection grew during the 1980s.

These results might suggest that cyclical unemployment should rise in response to increased labor-force attachment among women, but further analysis shows no association between these two factors. The authors attribute this to the disparate distribution of the sexes across industries and occupations. Women's employment is disproportionately concentrated in growth industries that demonstrate little cyclical fluctuation, while men are concentrated in industries with the opposite characteristic. Thus, although Korenman and Okun do not rule out the possibility that the increase in female labor supply during the 1980s reduced wage growth by lowering labor-market tightness, their findings suggest little, if any, change in the long-run cyclical behavior of the economy as a result of this phenomenon.

III. Implications for Macroeconomics

Two prominent macroeconomists, Olivier Blanchard and Finn Kydland, were invited to the conference to comment on whether the findings of the papers summarized above alter the way in which labor markets figure into their view of the workings of the macroeconomy. In particular, we were interested in whether the trend toward more flexibility and risk sharing in wage-setting practices would alter their theories and policy recommendations.

Blanchard's remarks focus primarily on the macroeconomic implications of lump-sum bonuses and profit sharing. He sees both schemes as ways of lowering the risk of bankruptcy among firms, and notes an interesting tension between the implications of increased risk sharing in labor contracts and of recently introduced financial arrangements, such as high-yield junk bonds. The former generally provides greater stability by reducing the likelihood of bankruptcy, while the latter raises the chances of a firm going under.

Blanchard argues that the reduction in bankruptcy risks has had three macroeconomic effects: 1) stabilization of employment in the short run, 2) alteration of the factors determining labor mobility, and 3) modification of the Phillips-curve specification. The first effect results from the simple fact that firms will not be as likely to close their doors during downturns and, through wage adjustments, will be able to retain workers longer. This should reduce employment swings during business cycles. The second effect is related to labor adjustments that follow sectoral shocks. If wages are rigid, then declining employment is the only signal that leads workers to leave hard-hit sectors. However, if wages vary, then both they and job security enter into a worker's decision. Finally, an increase in wage flexibility breaks the link between tightness in the labor markets (as measured by unemployment rates) and price inflation.

Kydland frames his remarks in terms of implications for business-cycle theory. He notes that many researchers interested in this line of inquiry have changed their methodology from the system-of-equations approach popular in the 1960s to one based on the neoclassical growth model. Under the former framework, models are constructed around equations that describe aggregate economic behavior, such as wage rates, unemployment rates, household consumption, and business investment. In contrast, the approach based on the neoclassical growth model stresses the use of empirical knowledge to

obtain parameter estimates for technology, preferences, and institutional arrangements. These parameter estimates provide realistic calibrations for simulation models intended to mimic, and thus explain, macroeconomic phenomena. Consequently, this transition to the use of the neoclassical growth model as the basis of macroeconomic analysis is important in determining how questions are posed and data are organized.

Kydland finds that research presented in this volume is, for the most part, organized around the former methodology—that is, based on estimates of aggregate behavioral equations. He stresses that in order to bridge the gap, questions posed in the business-cycle framework will have to be translated into the behavioral-equation framework, and vice versa. Therefore, business-cycle researchers may have to ask slightly different questions or else organize the information presented at this conference in a different way if they are to incorporate these findings into their research.

IV. Conclusion

The research presented at this conference underscores the thinking of many observers and market analysts who, during the latter half of the 1980s, perceived that developments were taking place in labor markets that altered certain basic relationships between wage behavior and economic performance. These essays suggest that the increased adoption of more-flexible pay schemes during the latter half of the decade led to lower labor costs, perhaps to more flexibility for firms in their employment decisions, and, in general, to more stability in employment (at least in the short run). Thus, evidence indicates that these more flexible pay schemes might be able to accommodate relatively lower unemployment rates without igniting serious wage inflation.

Although some observers argue that this increased flexibility, which stemmed from the adoption of lump-sum payments and profit-sharing arrangements, is simply a way to obscure wage concessions, the research presented here finds little support for this view. The fairly widespread acceptance of these alternative compensation practices by both workers and managers suggests that the shift in the relationship between labor markets, unemployment, and price inflation observed in the 1980s may extend well into the 1990s. This structural change, along with other changes noted at the conference, may be welcomed by policymakers attempting to contain inflation while simultaneously stabilizing output.

References

- Bell, Linda, and David Neumark.** "Lump-Sum Payments and Wage Moderation in the Union Sector," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk, N.Y.: M.E. Sharpe, Inc., 1991, pp. 45–62.
- Bils, Mark.** "Indexation and Contract Length in Unionized U.S. Manufacturing," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 145–71.
- Blanchard, Olivier Jean.** "Macroeconomic Implications," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 201–05.
- Gordon, Robert J.** "Inflation, Flexible Exchange Rates, and the Natural Rate of Unemployment," in Martin N. Baily, ed., *Workers, Jobs, and Inflation*. Washington, D.C.: The Brookings Institution, 1982, pp. 89–155.
- Korenman, Sanders, and Barbara Okun.** "Gender Differences in Cyclical Unemployment," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 177–95.
- Kruse, Douglas.** "Profit Sharing in the 1980s: Disguised Wages or a Fundamentally Different Form of Compensation?" in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 67–99.
- Kydland, Finn E.** "Macroeconomic Implications," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 207–13.
- Mitchell, Daniel J.B.** "Wage Pressures and Labor Shortages: The 1960s and the 1980s," *Brookings Papers on Economic Activity*, vol. 2 (1989), pp. 191–231.
- Uchitelle, Louis.** "Wage Increases Are Sluggish despite a Scarcity of Workers," *The Wall Street Journal*, September 1, 1987, p. A1.

- Vroman, Susan, and Wayne Vroman. "International Trade and Money Wage Growth in the 1980s," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 13–40.
- Wachter, Michael L., and William Carter. "Norm Shifts in Union Wages: Will 1989 Be a Replay of 1969?" *Brookings Papers on Economic Activity*, vol. 2 (1989), pp. 233–64.
- Weitzman, Martin L. "Macroeconomic Implications of Profit-Sharing," in Stanley Fischer, ed., *NBER Macroeconomics Annual 1986*. Cambridge, Mass.: MIT Press, 1986.
- Woodbury, Stephen A., and Douglas R. Bettinger. "The Decline of Fringe-Benefit Coverage in the 1980s," in Randall W. Eberts and Erica L. Groshen, eds., *Structural Changes in U.S. Labor Markets*. Armonk: N.Y.: M.E. Sharpe, Inc., 1991, pp. 105–38.