Comments and Discussion

Marvin H. Kosters: This paper by Mitchell presents interesting evidence on factors that influence rates of wage change. Some of the results mainly confirm what other studies have stated; for example, that nonunion wages show more responsiveness to slack than union wages, and that first-year union wage increases also show a significant response. Other results provide new insights into wage behavior by indicating that differences in responsiveness to prices and unemployment are related to such factors as contract duration, escalators, and other characteristics of wage setting.

By working with data at levels of aggregation that take into account differences in institutional arrangements for wage setting, Mitchell's approach gives some insight into how the timing of wage changes is affected. While opinions differ about preferred definitions of variables and forms of the equations, working with similar variables and equations across groups facilitates comparisons among them. In some instances, methods that need to be used to construct the data series are inevitably crude, but Mitchell is careful to point out ways in which the econometric results might be affected by the ways he assembled his data.

There are a number of points about details in the paper that could be noted. I will mention two that relate to construction of the data. First, in developing the manufacturing data, Mitchell apparently used medians for early years for which means were not available. While differences between medians and means are not large for later years when most nonunion workers received wage increases each year, only a small majority actually received general wage increases in earlier years. For example, in 1961 and 1962, only about 53 percent of nonunion workers in manufacturing received wage increases, and median adjustments are accordingly extremely small. Second, in constructing estimates of deferred wage

increases for contracts with escalators, escalator payments made during the first year are combined with all increases received later, and the annual rate is computed over the entire life of the contract. While this is consistent with methods used by the Bureau of Labor Statistics, it can influence the deferred wage increase variable. For retrospective analysis of this kind, a case can be made for following the more straightforward approach of including escalator payments made during the first year with other first-year increases, at least as an alternative to the approach that was followed.

The paper explores what the evidence seems to indicate about the extent to which wages are responsive to demand restraint and whether some sort of direct intervention to influence contract duration or the size of particular settlements might contribute to restraining the wage trend. While Mitchell does not make a strong statement of his views on the possible contribution of some form of direct intervention, he casts doubt on the idea that a limited number of bargaining situations can be identified that would have a major influence on overall wage trends, even if a direct and significant effect on such situations were sometimes feasible. Moreover, in his analysis he does not regard the mandatory controls of 1971–74, or for that matter the guideposts of the 1960s, as having exerted much influence on wages. I have no real disagreement with these judgments about the effects of policies intended to exert direct influence on wage trends.

It is possible to view the evidence as indicating little responsiveness to demand restraint. Mitchell characterizes the responsiveness to unemployment as relatively small and as having a disproportionate impact outside the union sector. The reasoning is that response to slack is modest and limited mainly to nonunion and first-year union wage increases. Moreover, the evidence on union wage responsiveness is apparently partly attributable to short-term contracts in the sample, and short-term contracts have recently been less prevalent than they were earlier. A small slowdown in wage increases for only a part of the work force limits the extent of price deceleration that stems from this source, and continuing price increases tend to support continuing wage increases more or less throughout the economy.

It is also possible, however, to interpret the evidence less pessimistically. The estimates reported in table 1 suggest a 0.4 percentage point wage response for nonunion and first-year union wage increases to a 1 percentage point increase in the unemployment rate from 6 percent. As

Mitchell points out, however, only about 28 percent of private nonfarm wage and salary workers are unionized. Moreover, the direct response to unemployment extends also to first-year union wage increases, which typically cover more than one-third of union workers each year. This permits the preponderant share of the estimated wage reduction to be reflected in prices, even if nonwage components of price remain unchanged. Further, although deferred wage increases are not affected directly by the higher unemployment, long-term contracts with escalators show a pronounced response to contemporaneous price increases and are thus indirectly affected. Hence the initial direct effects of unemployment operate indirectly through prices—quite quickly for contracts with escalators and with longer lags for other contracts. If the higher unemployment continues, first-year wage increases for expiring contracts will be affected directly as well. The main point here is that looking only at initial direct effects can give a misleading impression about the quantitative significance of the wage response. Indirect effects through prices should also be taken into account in tracing out the dynamics of the process as it works over time.

The reference I have made to price sensitivity places some reliance on the coefficient estimate showing contemporaneous price increases fully reflected by deferred wage increases for major unions (table 1). Mitchell cautions against taking this estimate at face value, but I believe he could place more reliance on the estimate. Although there is a great deal of variety in escalator provisions, I think there has been a real increase in proportionate payoffs in recent years. When the period 1973–76 is excluded from the regression, the size of the coefficient for contemporaneous price increases is markedly smaller; this could be expected not only as a consequence of whatever distortion may have been introduced by computation methods, but also as a result of higher proportionate payoffs under escalators during this period.

I am in general struck by the sensitivity to prices shown by the regression estimates for the union sector. In both types of regressions, estimates for first-year wage increases show they almost fully reflect price increases. Over the life of contracts, particularly for contracts with escalator provisions, prices also seem to be quite fully reflected. My reading of the regression estimates suggests that proportionate payoffs under escalators have recently exceeded the 0.57 ratio suggested in the paper, an estimate that is based on an average for the past ten years using data that in some respects tend to underestimate the ratio. For the data from which these

escalator payoff ratios are estimated, for example, escalator payments near the beginning and end of contracts that are applicable to only part of the calendar year are included in the numerator of the ratio even though, as Mitchell's estimates suggest, first-year wage increases may fully reflect price increases during the year in which new contracts are negotiated.

Mitchell also develops some estimates of union wage prospects for 1979. My overall impression is that these estimates are more likely to be too low than too high. In the context of the method used for developing the estimates and his unemployment and inflation assumptions, there are three main reasons for this judgment. First, the use of the overall unemployment rate makes the assumed unemployment level higher relative to historical experience than would be the case if one of a number of "adjusted" unemployment measures were used. Second, the escalator payoff ratio estimates that are used may be about a tenth of a point too low. Third, it is possible that the relative wage measure stabilizes or even declines somewhat during 1978, partly as a result of the minimum wage increase and partly as a consequence of tighter labor markets. For comparison purposes, I note that mean effective wage increases for major unions in the private nonfarm sector averaged 8.1 percent in 1977, when unemployment was higher and inflation was lower. With construction excluded, the average increase would be slightly higher. While Mitchell does not put forward a directly comparable overall estimate, the estimate implicit in the data he presents is apparently about 8 percent or somewhat lower.

If unemployment and price behavior during 1979 are similar to the estimates that were used in calculating the projections, average wage increases for workers covered by major collective bargaining agreements are likely to exceed the 7 percent figure in the Carter administration's guidelines. No settlements, of course, would necessarily need to be inconsistent with the guidelines for this result to occur. However, in view of the dispersion in the size of individual wage settlements that has been the usual experience in recent years, the guidelines are likely to be severely strained if not discredited completely by wage settlements at the high end of the range.

Michael L. Wachter: There are two major parts of the Mitchell study. The first explores the issue of whether unions contribute to the difficulty

of restraining inflation. The second analyzes some relatively unused data on union contracts in the context of the Phillips curve. Both parts are relatively distinct. Because of the nature of the data, the empirical evaluation brings little new insight into the wage inflation mechanism.

Mitchell is to be commended for his careful inspection of the data on union wage contracts. The analysis of the first-year and life-of-contract wage increases and the differences between escalated and nonescalated contracts yields interesting insights. Mitchell also adopts a simple wage equation consisting of the Bureau of Labor Statistics' unemployment rate and rate of change of prices (lagged one period) to explain these data. Although I believe that the inclusion of many variables in a wage equation (for example, introducing discouraged worker unemployment rates) can be counterproductive, Mitchell's equations may be too simple. Much of the current debate on wage equations involves differences in unemployment constructs; the dynamics of the wage-wage, wage-price, or wage-money supply spiral; and the issue of shifting coefficients over time. Mitchell's equations are not adapted to shed light on any of these questions.

The value of the equations is that they provide information for comparing Mitchell's diverse collection of dependent wage variables. The results of regressing wage inflation on the BLS unemployment rate and one-period lagged prices are well known. As a result, a comparison of the equation that uses the standard dependent wage variable with Mitchell's nonstandard dependent variables indicates something about the behavior of these latter variables. That is, the interest is on the new left-hand side variables rather than on new right-hand side ones.

The problem with this approach, however, is that it cannot reveal much new information about the wage inflation mechanism. Mitchell's discussion of these issues is thus based as much on his earlier work as it is on the empirical findings of this paper.

Mitchell's analysis of the union role in the wage inflation process focuses on two points: the ability of demand restraint to bring about a deceleration in union wage gains and the role of escalator clauses in maintaining or causing inflation. He then addresses the wage outlook for 1979 and the possible role for an incomes policy.

I disagree strongly with Mitchell's position on the lack of effectiveness of demand management in the inflation process. A low coefficient on the unemployment term and a high value (near unity) on lagged prices does

not imply an ongoing inflation process that will not respond to the level of aggregate demand. In previous papers I attempted to illustrate this point in two ways.[1] First, the lagged wage or price term can be replaced by a lagged variable for money supply. In this simple, "quasi-reduced" form of the equation, wages respond to unemployment and money-supply growth rates. The notion of an ongoing wage-wage or wage-price push cycle is broken by the obvious role of the money supply. It is difficult to argue that aggregate demand variables are not crucial in a wage equation that contains both a significant unemployment variable and lagged money-supply growth variables (with a sum of coefficients equal to unity). Second, the coefficients of the wage equation shift systematically over time, and there is evidence that the responsiveness of wage inflation to demand variables is increasing. For example, the role of escalator clauses should be expected to have a significant impact in shortening the transmission mechanism through which demand management alters the inflation rate.

In general, I agree with Mitchell in his evaluation of escalator clauses. Escalators alter the inflation mechanism, but there is no reason to assume that escalators themselves have an independent effect on the inflation rate. In addition, escalators are likely to be important in the efficient workings of the micro exchange relationships. Attempts by macro planners to tamper with these contracting schemes can have serious adverse effects.

I see little evidence in this paper to support an argument that unions are a source of today's inflation problem. In the early 1960s the average inflation rate was approximately 1.5 percent. Today, the "built-in" inflation rate appears to be approximately 7 percent. Are labor unions stronger today than they were in the 1950s and 1960s? What is the mechanism through which they have somehow managed to boost the inflation rate?

In the political arena, labor unions have lost as many battles as they have won in the past few years. The defeat of the labor reform bill of 1978 is an important indicator of the political strength of unions.

After decades of slow union growth, it is difficult to believe that the nonunion sectors are more fearful of being organized now by new unions than they were in the 1950s. (A few exceptions exist, however.) That is,

1. See, for example, Michael L. Wachter, "The Changing Cyclical Responsiveness of Wage Inflation," *BPEA, 1:1976*, pp. 115–59.

if a "threat effect" exists from the unionized sector, leading to wage spillovers, it was stronger in the noninflationary 1950s than in the inflationary 1970s.

The "problem" union areas seem to change over time. In the early 1970s contract construction and the municipal sectors were accused of fomenting cost-push wage inflation. Six years later they have the lowest rate of wage growth. Why are they not labeled as a source of wage deceleration? Today, the problem areas include steel and mining. But these are certainly special examples. Underground mining is an occupation that will require *relative* wage gains if employment is to be increased. I believe that wage increases in mining would be above average, in the current energy context, whether or not the industry were unionized. The steel industry is a special case because of difficulties of handling the new no-strike provision. Wages in the steel industry are probably now out of line, but if additional import protection is denied, I believe that they will fall back into line over the next one or two bargaining sessions.

And in terms of the outlook for 1979 and 1980, I believe that the inflation issue depends crucially on whether the monetary and fiscal policymakers lower the unemployment rate significantly below its current level of 6 percent. If the economy overheats again, the inflation rate will certainly accelerate. But once again, as has traditionally been the case, the nonunion sectors, responding to tight labor markets, will lead the way into higher levels of wage inflation. Union wage policy is an indicator, but not a cause of today's inflationary pressures.

General Discussion

Several Brookings panel members discussed the responses of wages to unemployment among Mitchell's various wage disaggregations. Franco Modigliani was surprised at the finding that first-year changes in wages in the major union sector were as sensitive to unemployment as wages in the nonunion sector. Albert Rees noted that the sizable response of wages in the union sector to unemployment came from the short-term contracts in the sector. He pointed out that these were dominant early in the sample period and suggested dividing the period for estimation purposes. Mitchell replied that short-term contracts arose not only because some contracts were negotiated to be short-term but also because long-term contracts

were interrupted. As explained in the text, when the latter were interrupted, the calculated annual wage increase for the terminated contract could be much higher than originally bargained, and the new contract could provide a large increase as well. Mitchell added that his estimates of overall responsiveness to unemployment were comparable with aggregate studies such as George Perry's (*BPEA, 2:1978*).

Robert Hall pointed out that unions negotiated an entire wage relation rather than a wage, and that actual wage costs under this relation would be more responsive to economic conditions than Mitchell's data showed. The wage-drift process by which wages are changed through worker reclassification might reveal considerably more flexibility in wages. Greater flexibility was also achieved by overtime payments, while the introduction in some contracts of employer benefits to supplement unemployment compensation added a different irregularity to the labor cost function facing the firm.

Michael Wachter suggested that the situations in which short-term contracts were negotiated merited attention. In particular, were these identifiable as situations in which the unions were gaining or losing power? Mitchell agreed this was an interesting topic for investigation and noted that the construction industry was an example of an industry in which shorter-term contracts reflected the bargaining weakness of the union. Modigliani was puzzled that the number of long-term contracts had increased over time, when one would have anticipated a shortening of contract duration in response to uncertain inflation rates. He did not think escalator clauses could substitute perfectly for shorter-term contracts because these usually gave only partial protection against price inflation. Hall noted that the change to long-term contracts had occurred prior to the acceleration in inflation; and Rees added that there had in fact been some movement back to shorter contracts in recent years.

Laurence Seidman felt that for evaluating tax-based incomes policies, it would have been useful to have explored the effects of profits on wages using the contract file. Mitchell replied that this was difficult to do with the contract data for unions that negotiated a single agreement with several firms in an industry.

Hall found it significant that someone with Mitchell's experience in wage control should be unenthusiastic about government intervention in wage setting. Mitchell said his principal doubts on intervention were with respect to the view that one could identify "key sector" contracts which,

if influenced, would in turn influence other wages. But he did not believe guidelines could do much harm. He also conjectured that the reason for the ambiguity about the nature of the inflation process, whether the linkages were wage-wage or wage-price, might indicate that people are uncertain about inflation and search for an indicator, so that if a guideline number were made credible, it might have an influence on wage decisions. William Fellner said the interesting question was whether the coefficients governing the wage-price process would change if a permanent change in policy behavior could achieve credibility. He believed that the new round of formalized incomes policy would fail and be followed by a more credible fiscal and monetary disinflation, which would lead to changed coefficients. Edmund Phelps objected that the presently estimated coefficients carried the influence of other disinflationary periods. But Fellner replied that few had believed the policymakers were committed to curing inflation in these earlier periods; he added that disinflationary fiscal and monetary policy had worked in other countries. However, Stephen Goldfeld observed they did not have long contracts and a staggered bargaining procedure, so that their experience might not be applicable to this country.