Patterns of Union Membership and Relative Wages

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This paper, using the Panel Study of Income Dynamics, examines the effects of union membership on the wages of white males. The empirical relationship between current wage and union status is estimated controlling for union status in years before and after the current year. The resulting status profiles are four years long in contrast to one or two years used previously. Results indicate that wage changes experienced when workers join or leave unions vary significantly and systematically across these profiles. For example, a status change that appears to be long-term is associated with larger absolute wage changes than short-term changes in status.

I. Introduction

The large wage differences between union and nonunion workers have been a long-standing topic of study. To explain the differences, two sets of theories have evolved: monopolistic and competitive (Lewis, 1959). According to monopolistic theories, unions possess a certain amount of market power, and they use this power to raise the wages of members above the competitive (nonunion) level. Thus, a worker lucky enough to gain entry to a union will experience some increment in wage. The main thesis of competitive theories is that union and nonunion wages may differ in the context of competitive markets. These theories argue that union wage premiums may exist as either intrinsic productivity differences between union and nonunion workers or compensating wage payments that are necessary to induce workers to accept a more rigid work environment (see, for example, Lewis, 1959; Ashenfelter and Johnson, 1972; and Duncan and Stafford, 1980). Traditional research has been unable to capture the relative importance of these alternative explanations. Notable exceptions include recent papers that explore differences in union and nonunion job characteristics (see Duncan and Stafford,

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1980) and differences in interpersonal productivity (see Mellow, 1981). It is with this last issue that we are primarily concerned.

For some time, analysts have recognized the possibility that union workers receive a higher wage because they are more skilled or productive. This has led many researchers to estimate standard wage equations that include controls for average skill differences, such as education and experience, between union and nonunion workers (see, for example, Ashenfelter and Johnson, 1972; Brown and Medoff, 1978). Even with detailed micro-data, however, a wage equation may not capture all of the intrinsic productivity differences that may exist between union and nonunion workers. Thus, to the extent that these differences have been omitted from standard wage equations and are correlated with the probability of being a union member, the estimated relative wage impact attributed to union membership is biased, particularly for those leaving or joining a union.

To more accurately measure union wage premiums, we will observe what happens to the wage of an individual who is moving between union and nonunion status. This method was first employed by Wesley Mellow. Rather than comparing average union and nonunion wages, Mellow, using paired observations from the Current Population Survey, recorded actual wage changes for individuals who reported a status change (a change from the union to nonunion sector or vice versa). To facilitate comparisons, we initially employ a model similar to Mellow's, but we use a different data set, the Michigan Panel Study of Income Dynamics, and we extend the period of time over which we observe an individual's status from two to four years. Although Mellow could identify those who join or leave a union, data limitations constrained these comparisons to two years only. While Mellow's research indicated, for example, that union joiners experience an average wage gain of 7.5 percent, it was of interest to us to determine how this estimate might vary if we could extend the period of observation beyond two years. This extension makes it possible to distinguish between several groups, comprised of workers who have joined a union perhaps for the first time, those who may be leaving the union permanently, and those who have intermittent union experience. Our results indicate that significant compositional effects do exist with respect to the behavior of wages between groups experiencing lasting changes in status and those exhibiting temporary changes.

We also investigate the pattern of observed wage changes before and after a status change. Specifically, do wages "rebound" after a worker leaves a union? And are initial wage gains compounded after union entry is gained? With respect to the latter, of course, it is possible that the union wage premium, if it exists, may be distributed over several years. For example, part may be received upon entry and part upon completion of a trial period or apprenticeship program.¹

¹The average period of apprenticeship for skilled trades is 3.5 years. During the first year of apprenticeship, a union member may only earn 40 to 60 percent of the full union wage for their occupation.