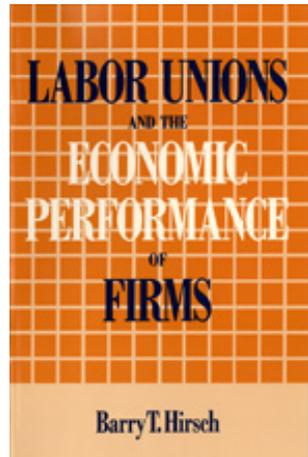


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Introduction

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Introduction

During the 1970s and 1980s, there was a substantial decline in the relative importance of labor unions and of manufacturing production in the United States. Over this same period, a marked slowdown in aggregate wage and productivity growth drew increased attention from policymakers and economists. Only recently have researchers focused attention on the effects of labor unions on economic performance and examined the relationship between economic performance and declining union membership. This study analyzes in detail union effects on profitability, investment behavior, productivity, and productivity growth during the 1970s, based on new evidence collected on union membership at the firm level.

The decline in U.S. unionization has been greeted with unrestrained glee by many business groups and with grave concern (often coupled with resignation) by union supporters. The extent of the union decline is evinced by statistics on union membership and representation elections. Union density, measured by the percentage of nonagricultural employment comprised of union members, fell from 30 percent in 1970, to 23 percent in 1980, and to 17 percent by 1987 (19 percent were *covered* by collective bargaining agreements during 1987).¹ The survey of publicly traded U.S. manufacturing companies conducted for this study (see chapter 3) finds that among 452 companies providing information for both 1977 and 1987, collective bargaining coverage declined from 30.5 percent in 1977 to 25.0 percent in 1987. Current Population Survey (CPS) data on individual manufacturing sector workers in 1987 indicates that 24.7 percent were covered by a collective bargaining agreement (U.S. Bureau of the Census 1989, table 684). Data on new union organizing reveal a similar pattern over time, the ratio of union representation elections and new workers organized to total employment both falling sharply since the 1950s.² Although it is difficult to predict future levels of union representation, Freeman (1985, p. 49) calculated a long-run, steady-state

union coverage density of about 10 percent in the private sector, based on trends in new organizing and coverage loss (decay) through 1980. Subsequent organizing and decay trends now suggest steady-state levels of private sector union coverage of less than 5 percent (Freeman 1988; Chaison and Dhavale 1990).

Explanations for the decline in unionism abound, although the relative importance of contributing factors remains very much in doubt (see, for example, Dickens and Leonard 1985; Hirsch and Addison 1986, chap. 3; Freeman 1988; Reder 1988). The explanation most commonly proffered is that “structural” changes in the U.S. economy have led to declines in unionization. It is argued that employment has declined in historically highly unionized sectors of the economy (e.g., production jobs in manufacturing), whereas job growth has occurred in nonproduction jobs in the largely nonunion service sector. Complementary explanations include increased foreign competition impacting most directly the goods-producing sectors of the economy, deregulation in highly unionized transportation and communication industries, more rapid job growth in low-union regions of the country, increased entry of women into low-union sectors of the labor market, and less favorable attitudes toward unions exhibited by management, workers, legislatures, and administrative and judicial authorities.

Recent studies have challenged purely structural explanations for declining unionism. Linneman and Wachter (1986) provide evidence that within 1-digit industries, declines in employment from 1973-1984 are restricted almost entirely to union workers while, in contrast, nonunion employment grew in almost all sectors. They calculate union premiums in each industry, relative to an “opportunity cost” wage in growing (primarily nonunion) sectors of the economy. Union premiums are found to have increased over this period and Linneman and Wachter conclude that much of the decline in union employment was in response to higher union wage premiums. Linneman, Wachter, and Carter (1990), who provide more recent and detailed evidence, reach an identical conclusion. Likewise, Freeman (1985; 1988) is skeptical of the structural explanation, noting that Canada has not had such significant declines in unionism, despite similar structural changes. Freeman links the decline in unionism

to increased management opposition (evidenced primarily by increased unfair labor practice charges) resulting, he argues, from an increased union wage premium and less favorable NLRB rulings. Blanchflower and Freeman (forthcoming) utilize international data and conclude that in the United States the union wage premium is larger, and decline in union density greater, than in other OECD countries.

This monograph examines a related explanation for union decline. A model of union rent-seeking is described in which unions capture some share of the quasi-rents that make up the normal return to investment in long-lived capital and in research and development (R&D). In response, firms rationally reduce their investment in vulnerable tangible and intangible capital. Contraction of the union sector, it is argued, has resulted in part from the long-run response by firms to union rent-seeking, and was inevitable given the relatively poor economic performance and prospects among unionized companies during the 1970s. Specifically, companies with extensive unionization are found to have had lower rates of profit, market value, capital investment, and R&D investment than similar companies whose workers had limited collective bargaining coverage.

The union rent-seeking framework introduced in this monograph contrasts with the traditional on-the-demand curve model. In the traditional model, union monopoly power in the labor market is viewed as changing relative factor prices through its ability to raise union compensation above competitive levels. In response to a higher wage, union firms move up and along their labor-demand curve by decreasing employment, hiring higher-quality workers, and increasing the ratio of capital to labor. Total investment in innovative activity and labor-saving capital can increase or decrease owing to offsetting substitution and scale effects.

The traditional model may be inadequate in this instance for at least two reasons. First, settlements off-the-labor-demand curve, with lower wages and greater employment than would obtain in the on-the-demand curve model, are preferred by both the union and management. If settlements are not on-the-labor-demand curve, the effect of unions on factor mix cannot be predicted in straightforward fashion. A second shortcoming is the traditional model's characterization of union wage increases as exogenous or independent of factor price changes. In the rent-seeking framework, union wage premiums are viewed as levying a tax on firm

earnings. The union tax is not viewed as an independent factor price change but, rather, as an *outcome* made possible by both union power in the labor market and the presence of firm quasi-rents.

Implications of the rent-seeking model differ from the traditional on-the-demand curve model. Firms may be less rather than more likely to commit to tangible and intangible capital investments that are relatively long-lived and nontransferable, since such investments will face high union tax rates. Long-run implications deriving from the union rent-seeking model include the possibility of lower rates of profit and capital investment, decreases in R&D and other innovative activities, and slower productivity and output growth. These possibilities are explored in subsequent chapters.

Empirical work in this monograph builds on a rapidly growing literature examining union effects on profitability and productivity, and a more limited body of evidence examining union effects on firm investment and productivity growth. Studies examining union effects on profits almost universally find that unions decrease profitability. This conclusion holds for studies using industries, firms, or lines of business as the unit of observation; for models where the profitability measures are industry price-cost margins, firm rates of return to capital or sales, Tobin's q or other market value measures, or stock market value changes in response to union "events"; for simultaneous equation as well as single equation models; and regardless of the time period under study.

Despite the consensus that profitability is lower in unionized settings, there is disagreement as to the magnitude of the profit reduction and the sources from which union gains are obtained. Economists are understandably skeptical that large profit differentials can survive in a competitive economy, notwithstanding the sizable union-nonunion profit differences found in the empirical literature. Unfortunately, little attention has been given to the sources from which unions appropriate rents. Several studies conclude that unions reduce profits primarily in highly concentrated industries and that monopoly power provides the primary source for union compensation gains. Other studies call this conclusion into question and argue that returns from firm-specific R&D capital and weak foreign competition are more likely sources for union gains.

Little attention has been given to union-nonunion differences in investment behavior. The union rent-seeking model predicts that unionized firms invest less in highly taxed investment paths than do similar nonunion firms. The small number of previous studies examining union effects on firm investment behavior provide support for the union rent-seeking model. Unionized companies invest less in physical capital and R&D than do similar nonunion companies, and the level of innovative activity appears to be decreased by union coverage. If unionized firms invest less in tangible and intangible capital, over the long run they should have slower growth in output and employment. While there is surprisingly little research on this latter topic, studies do suggest, however, that unionization has produced significantly slower employment growth (Linneman, Wachter, and Carter 1990; Leonard forthcoming) and, perhaps, weaker sales (output) growth (Clark 1984; Freeman and Medoff 1984).

Union effects on productivity have received considerable attention since the appearance of the study by Brown and Medoff (1978), which concluded that union establishments are about 20 percent more productive than similar nonunion establishments, after accounting for differences in capital intensity and labor quality. Considerable methodological reservations attach to this and other studies in this literature, however. The fuller body of empirical evidence does not suggest a sizable union productivity effect, nor are large productivity effects consistent with empirical evidence on profitability and employment (Addison and Hirsch 1989).

The link between unions and productivity *growth* is rather opaque. There are numerous studies examining total factor productivity growth, many of which include industry union density as a control variable. These studies generally find productivity growth lower among firms and industries with high union densities, but this result is suspect given the data and econometric limitations of these studies. The rent-seeking model implies, however, that even if unionism has no direct effect on productivity growth, it may affect it indirectly via union effects on growth-enhancing investments in physical and R&D capital.

A serious limitation of much of the previous empirical research on unions and firm performance has been the difficulty in obtaining firm-level measures of union coverage. In order to examine union effects on

firm performance, 1977 union data from the survey conducted in this study were matched to company and industry data on a panel of U.S. manufacturing firms over the 1968-1980 period. Use of this data set facilitates a detailed examination of the relationship between unionization and firm performance.

Union coverage data for 1987 were also collected. Because of limitations on other firm and industry data available at the time this study was conducted, the 1987 data were not used to analyze union effects on firm performance. The data, however, provide direct evidence on the magnitude of firm-specific changes in union coverage between 1977 and 1987 (chapter 3). No such information is publicly available.

In the following chapters, theory and evidence on the relationship between unions, investment, and economic performance are provided. Chapter 2 presents a theoretical development of the union rent-seeking model, in which union effects on profitability, the level and mix of tangible and intangible capital investments, factor usage, and productivity growth are examined. In chapter 3, detailed discussion of the union coverage survey is provided. Chapter 4 provides the modeling and estimation of union effects on firm profitability and market value. Firm investment behavior is examined in chapter 5, while productivity and productivity growth are the focus of chapter 6. Chapters 4, 5, and 6 each contain a brief survey of previous research in the area under study. A summary and evaluation are provided in chapter 7.

NOTES

1. Data for 1970 and 1980 are from Troy and Sheflin (1985, table 3.41). Figures for 1987 are derived from the Current Population Survey (U.S. Bureau of the Census 1989, table 684). Although the former source calculates figures based on union-reported dues, and the latter on surveys of individuals, figures from the two surveys are very close during years in which both report union density. Private sector union membership density is substantially lower than economywide density. Estimates of union membership and contract coverage by detailed industry and geographic area are provided in Curme, Hirsch, and Macpherson (1990).

2. Election data are summarized in NLRB Annual Reports (these reports have not appeared regularly during the 1980s) and are made available on data tapes. There was a particularly sharp and permanent drop in union organizing activity between 1981 and 1982; the average 1982-1987 level of organizing is about half the 1975-1981 level (Chaison and Dhavale 1990, table 1, p. 369).