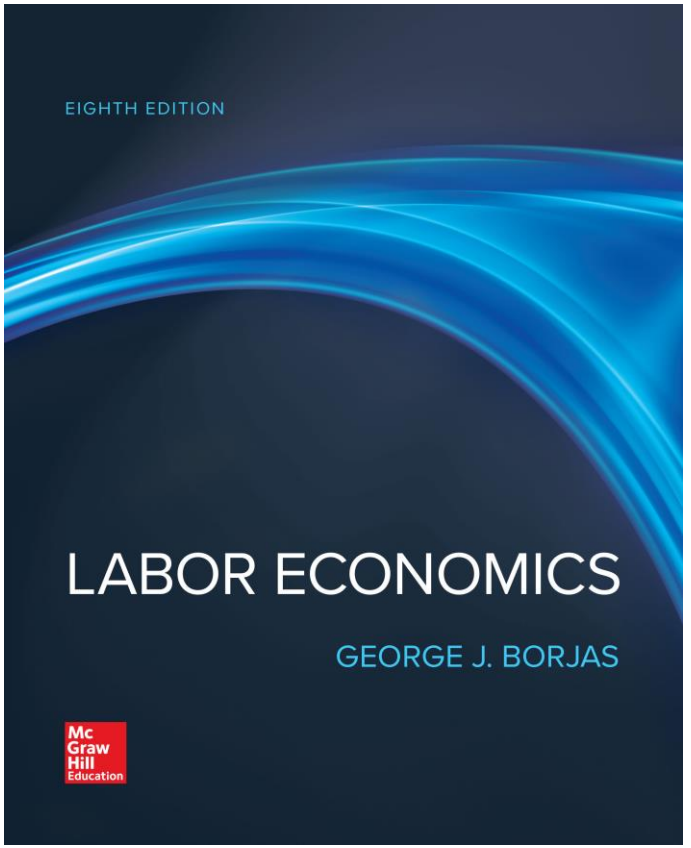
Chapter 10

Labor Unions



“Union gives strength.”
-Aesop

Introduction

Unions attempt to maximize the well-being of their members.

Unions can flourish only when firms earn above-normal profits.

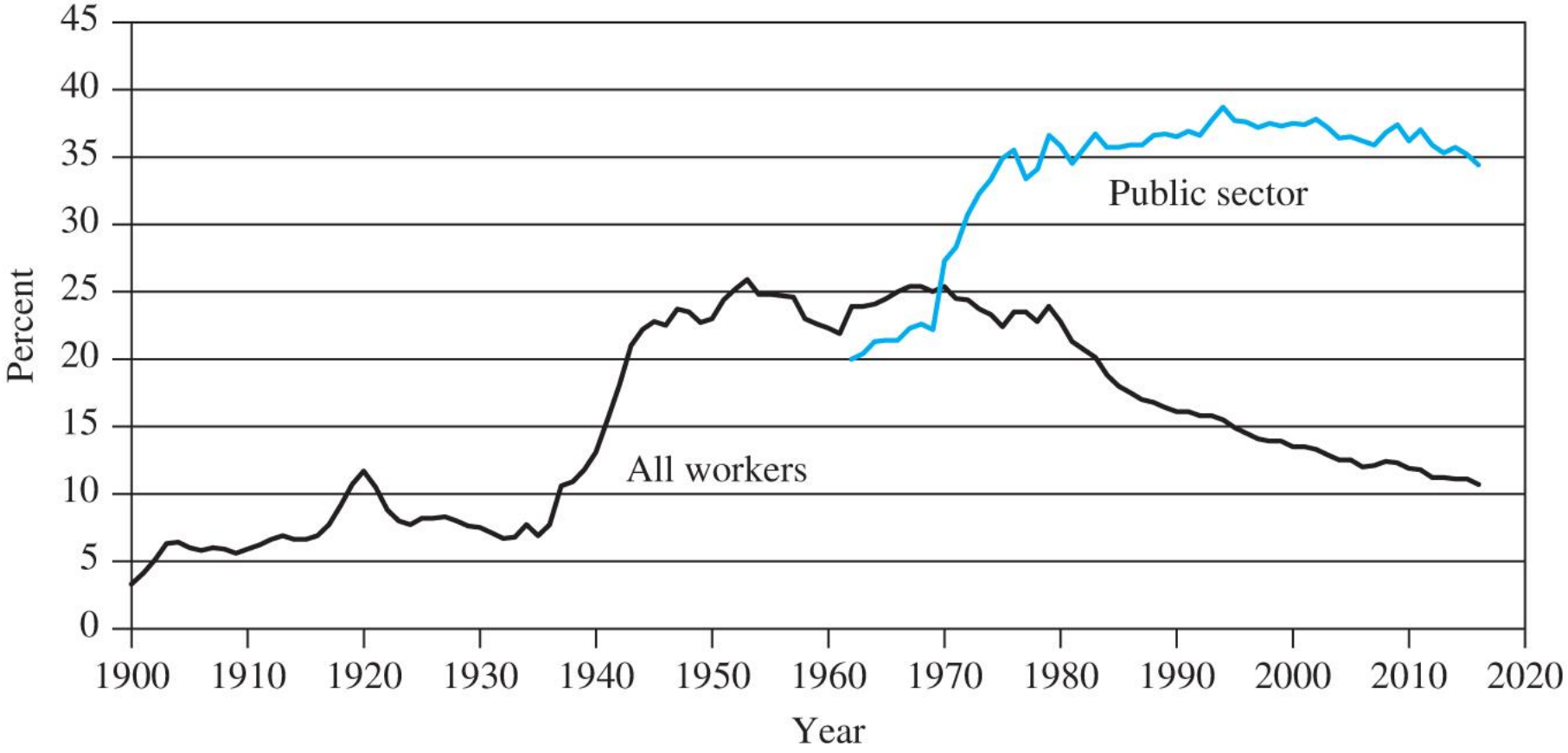
Unions influence practically all aspects of the employment contract.

Unions in the United States

Private-sector unionization rose between 1930 and 1960 (from 8% to 25%) and then began a steady decline (to under 15% by the 2000s).

Public sector unionization increased dramatically during the 1970s and coverage has remained above 35% since.

Union Membership in the United States, 1900-2016



Unions in the United States

Unionization in the United States has declined more rapidly than in other nations.

Differences in unionization across countries arise from variations in the degree of political effectiveness of union movements.

A Brief History of Unions

Prior to the Great Depression, the public did not favor unions.

Employers frequently used “yellow dog contracts.”

- Yellow dog contracts stipulated that the worker would not join a union.

A Brief History of Unions

Under the New Deal in the 1930s, the legal environment treating unions and employers changed.

Four major public laws:

- The Norris-LaGuardia Act of 1932.
- The National Labor Relations Act of 1935.
- The Labor-Management Relations Act of 1947.
- The Labor-Management Reporting and Disclosure Act of 1959.

Structure of American Unions

AFL-CIO at the top of a "pyramid."

Local union or craft union.

Each tier plays different role in collective bargaining.

Political lobbying.

Organizational structure varies across unions.

Union dues on members average about one percent of each worker's annual income.

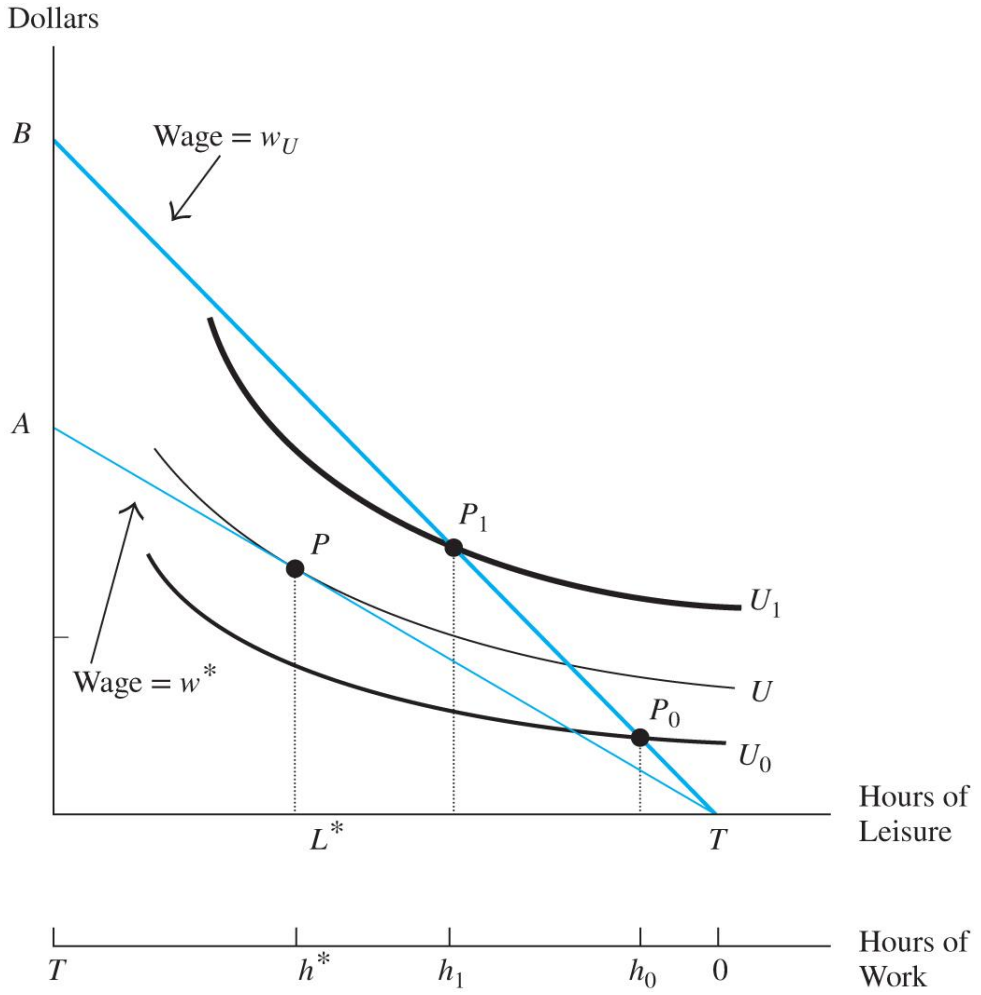
Determinants of Union Membership

A worker joins a union if the union offers him or her a wage-employment (benefit) package that provides more utility net of union dues than the wage-employment package offered by a nonunion employer.

Higher wages increase firm costs, so there could be employment cutbacks.

If a firm's demand curve for labor is inelastic the employment reduction is small (and vice versa).

The Decision to Join a Union



The budget line is given by *AT*, and the worker maximizes utility at point *P* by working h^* hours. The proposed union wage increase (from w^* to w_U) shifts the budget line to *BT*. If the employer cuts back hours of work to h_0, the worker is worse off (utility falls from *U* to U_0 units). If the employer cuts back hours only to h_1, the worker is better off.

The Demand for and Supply of Union Jobs

The demand for union jobs depends on the size of the wage increase, the amount of employment loss, and the costs of union membership.

The supply of union jobs depends on the ability to organize a workforce, the legal environment affecting union activities, the resistance of management, and whether a firm is making excess rents.

Why Has Union Membership Declined?

The structure of the labor market has been changing since the 1960s.

Blue collar workers are less prevalent.

Jobs have shifted to right-to-work states.

There has been a marked increase in labor force participation rates of women.

Workers' demand for union jobs has declined.

Firms have become more resistant to unions.

Monopoly Unions

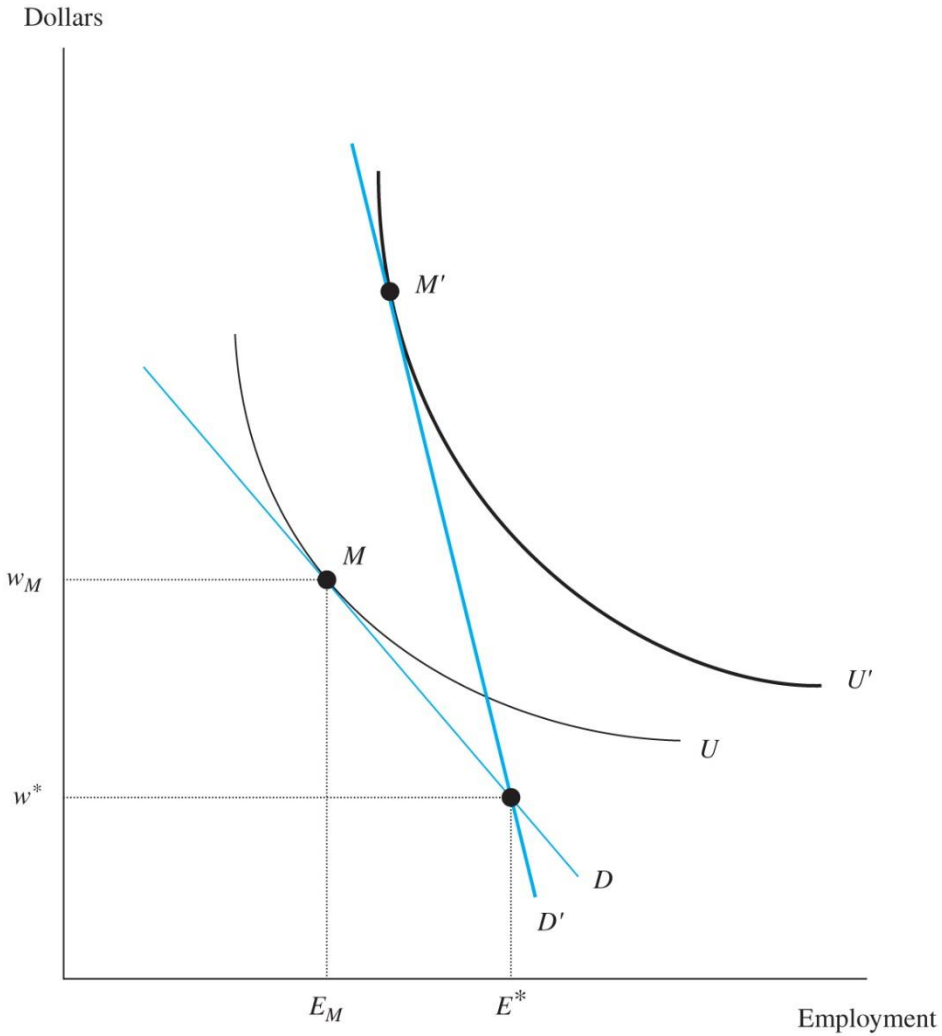
A union that is a sole seller of labor.

- The union sets the wage, and the firm hires an optimal amount of labor given that wage.

The model suggests some workers lose their jobs.

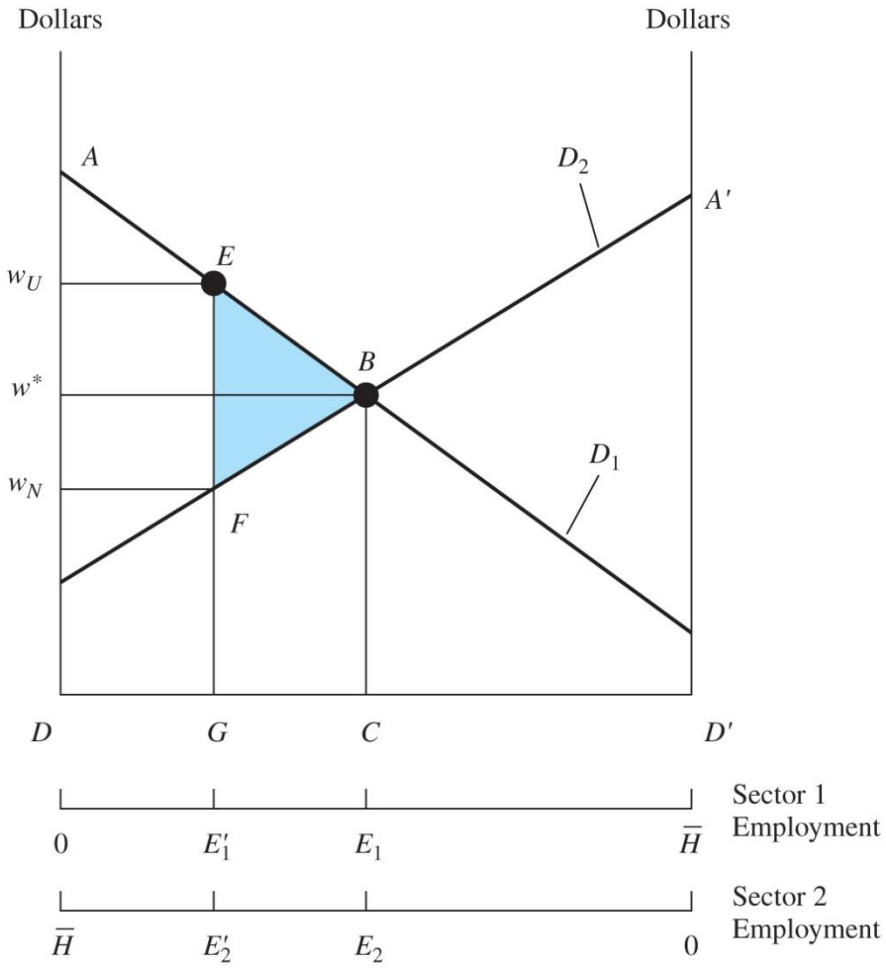
Unions are better off when the labor demand curve is less elastic.

The Behavior of Monopoly Unions



A monopoly union maximizes utility by choosing the point on the firm's labor demand curve, *D,* that is tangent to the union's indifference curve. The union demands a wage of w_M (up from the competitive wage w*) and the employer cuts back employment to E_M (down from the competitive level E^*). If the demand curve were inelastic (as in D'), the union could demand a higher wage, experience fewer employment cuts, and receive more utility.

Unions and Market Efficiency



In the absence of unions, the competitive wage is w^* and national income is given by the sum of the areas *ABCD* and *A′BCD′*. Unions increase the wage in sector 1 to w_U. The displaced workers move to sector 2, lowering the nonunion wage to w_N. National income is now given by the sum of areas *AEGD* and *A′FGD′*. The misallocation of labor reduces national income by the area of the triangle *EBF*.

Policy Application: Unions and Resource Allocation

Unions reduce the total value of labor's contribution to national income.

One estimate of the loss in national income is approximately 0.1 percent, a relatively small cost.

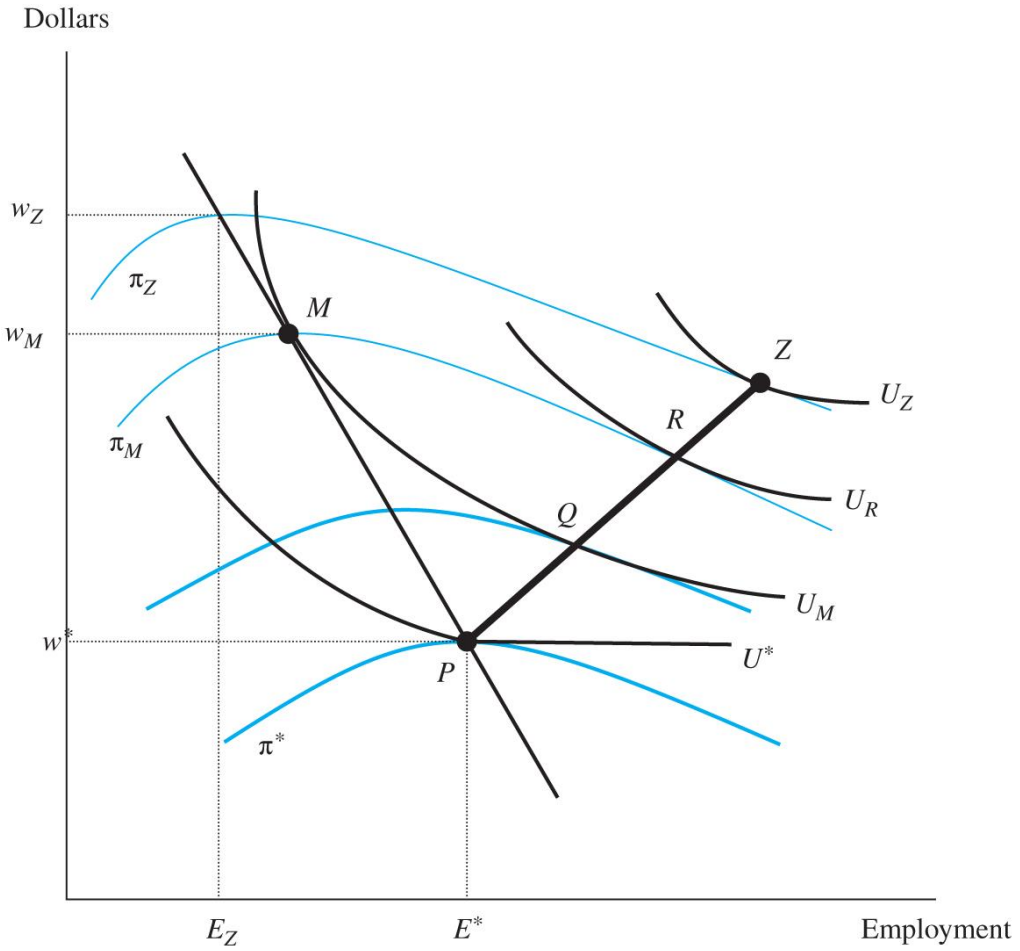
Efficient Bargaining

The firm and the union could make a deal that makes at least one of them better off without making the other worse off.

The efficient contract curve lies to the right of the labor demand curve.

Efficient contracts imply that unions and employers bargain over wages and employment.

Efficient Contracts and the Contract Curve



At the competitive wage *w**, the employer hires *E** workers. A monopoly union moves the firm to point *M*, demanding a wage of w_M. Both the union and firm are better off by moving off the demand curve. At point *R*, the union is better off, and the firm is no worse off than at point *M*. At point *Q*, the employer is better off, but the union is no worse off. If all bargaining opportunities between the two parties are exhausted, the union and firm agree to a wage-employment combination on the contract curve *PZ*.

Featherbedding

Featherbedding occurs when labor contracts require overstaffing.

Featherbedding practices are negotiated to "make work" for the extra staff.

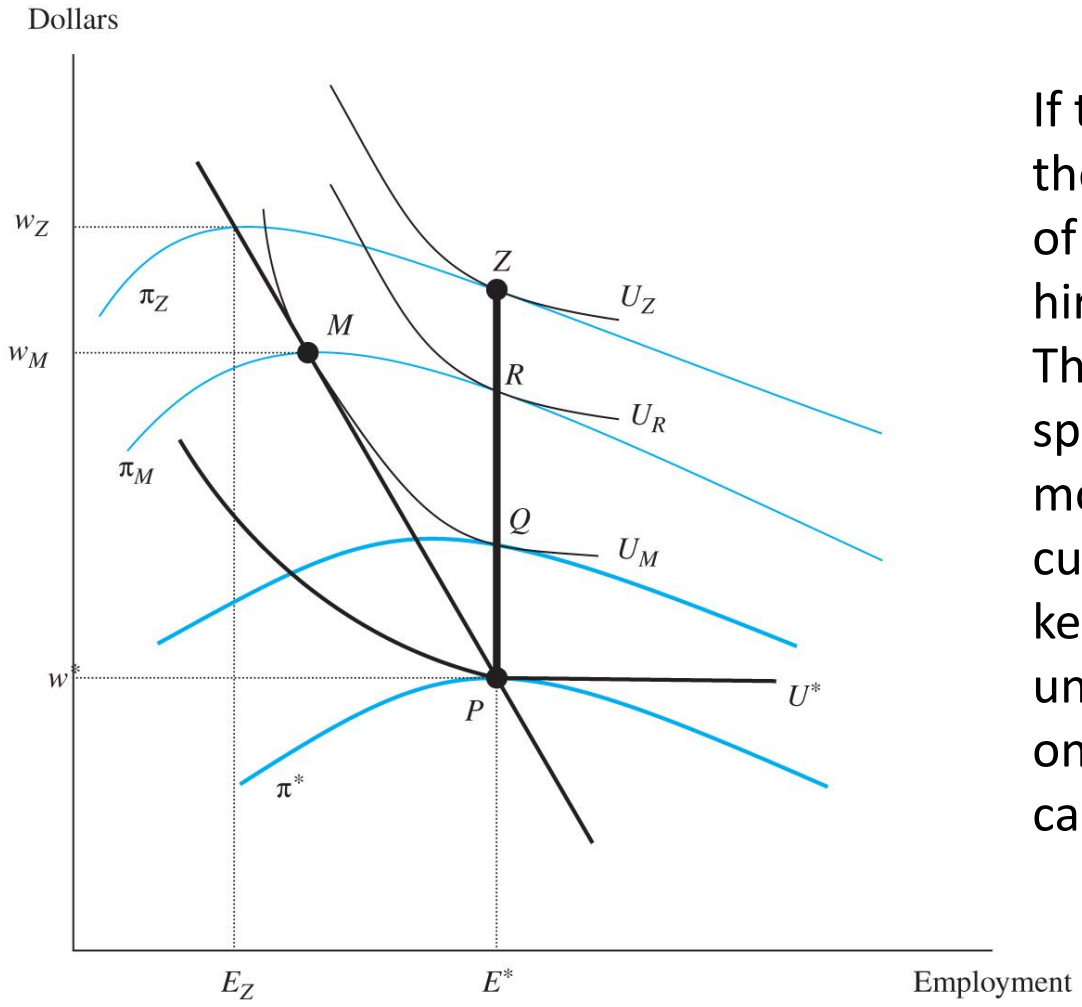
Strongly Efficient Contracts

If the contract curve is vertical, the deal struck between the union and the firm is strongly efficient because the unionized firm is hiring the competitive level of employment.

Under such a situation, the union captures some of the firm's rents.

The terminology does not imply allocative efficiency, but under strongly efficient contracts firms hire the "right" amount of labor.

Strongly Efficient Contracts: A Vertical Contract Curve



If the contract curve *PZ* is vertical, the firm hires the same number of workers that it would have hired in the absence of a union. The union and firm are then splitting a fixed-size pie as they move up and down the contract curve. At point *P*, the employer keeps all the rents; at point *Z*, the union gets all the rents. A contract on a vertical contract curve is called a strongly efficient contract.

Evidence on Efficient Contracts

Empirical studies have found that wage-employment outcomes in unionized firms do not lie on the labor demand curve, which supports the standard union bargaining model.

There is disagreement over whether the contract curve is vertical.

Strikes

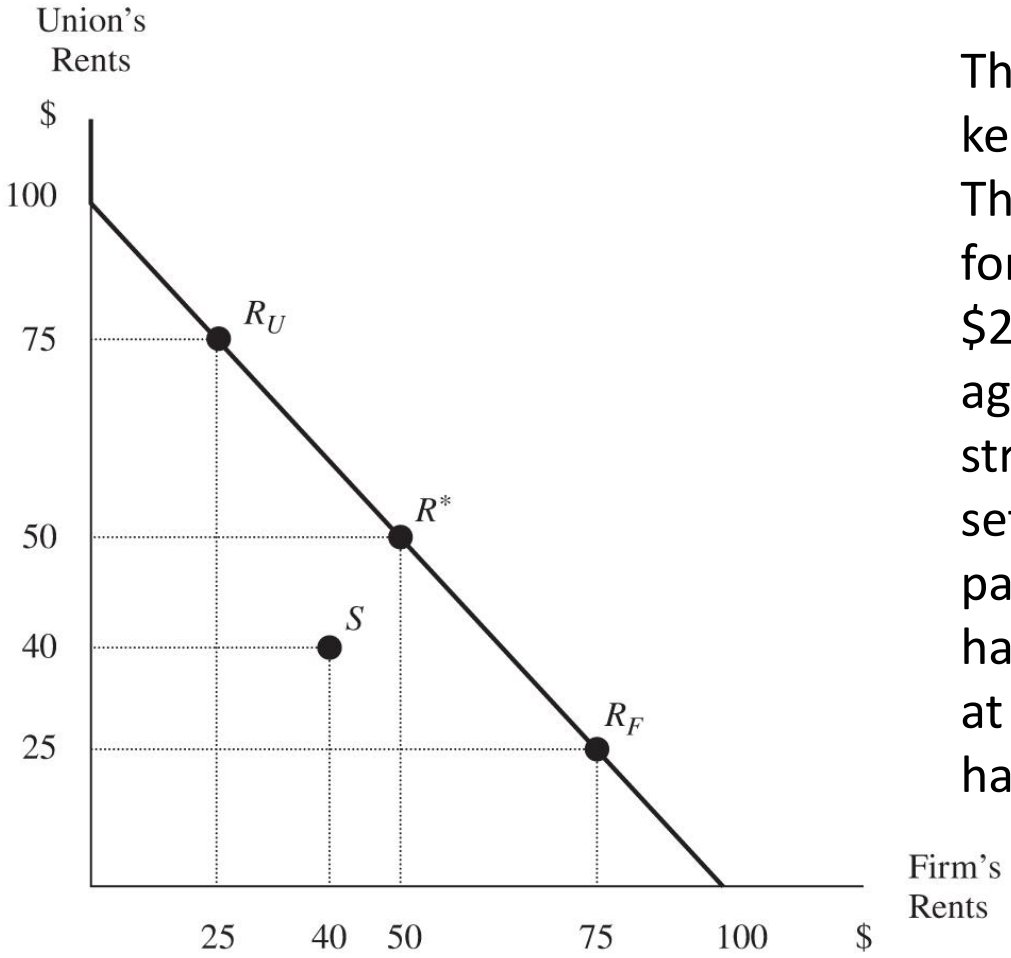
A strike occurs when neither party is willing to give in when negotiating.

Because strikes are costly due to lost production time, strikes shrink the amount of rents over which the parties are negotiating.

When parties have good information about the costs and likely outcome of a strike, then it is irrational to strike.

- The fact that "irrational" strikes occur is known as the Hicks Paradox.

The Hicks Paradox: Strikes are not Pareto Optimal



The firm makes the offer at point R_F, keeping \$75 and giving the union \$25. The union wants point R_U, getting \$75 for its members and giving the firm \$25. The parties do not come to an agreement and a strike occurs. The strike is costly, and the poststrike settlement occurs at point *S*; each party keeps \$40. Both parties could have agreed to a prestrike settlement at point R^*, and both parties would have been better off.

Strikes and Asymmetric Information

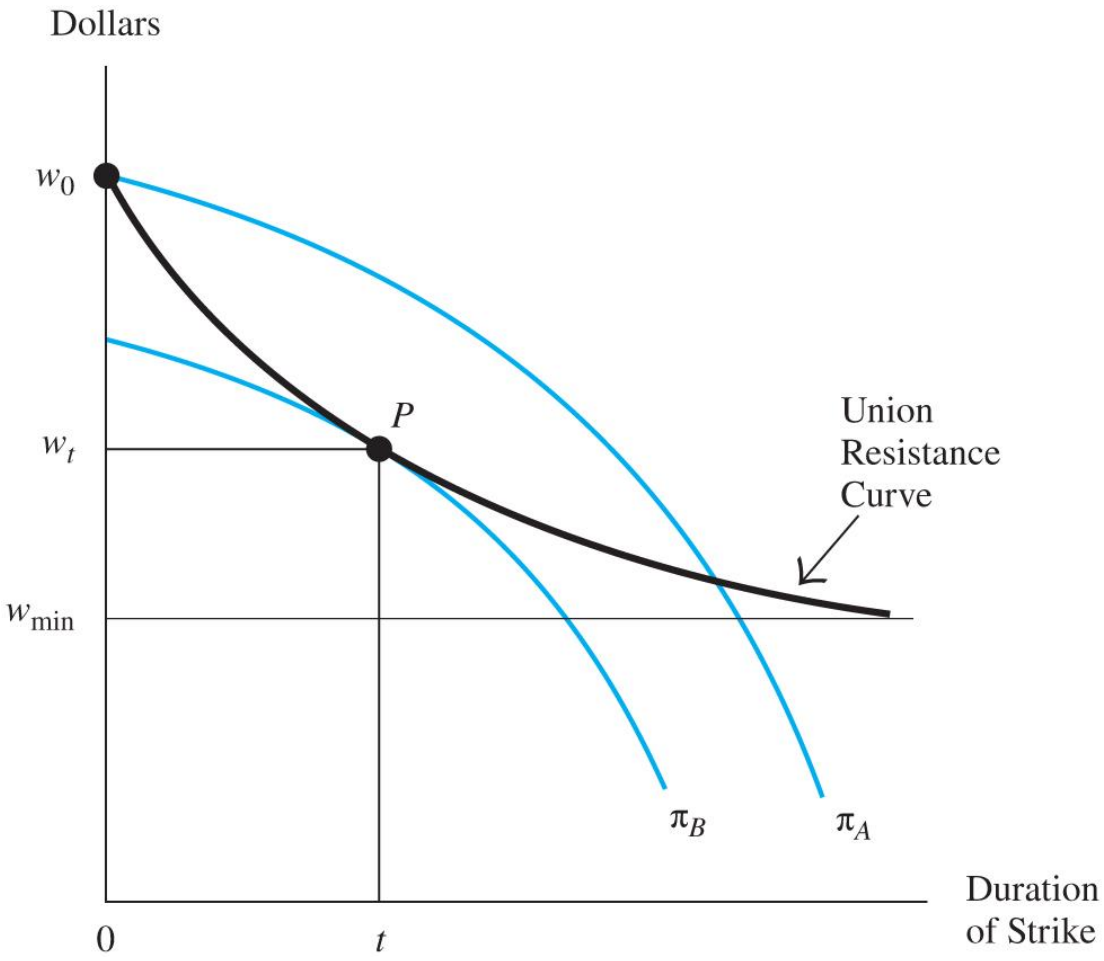
Strikes can be optimal if workers are not well informed about the firm's financial status.

Since the union will experience losses during a strike, it will reduce its demands throughout the duration of a strike.

A firm knows that the union will moderate its demands over time.

A firm incurs costs during a strike, so it will chooses a strike duration that maximizes the present value of profits.

The Optimal Duration of a Strike



Unions moderate (decrease) their wage demands the longer the strike lasts, generating a downward-sloping union resistance curve. The employer chooses the point on the union resistance curve that puts her on the lowest isoprofit curve (thus maximizing profits). This occurs at point *P*; the strike lasts *t* periods and the poststrike settlement wage is w_t.

Empirical Facts of Strike Activity

Strikes are more likely when a firm has a more volatile stock value.

In 1955, 2.1 million workers were involved in strike activity. In 2010, only 45,000 workers were involved.

The length of the strike determines the settlement wage. After a 50 day strike, the settlement wage falls by 2 percent. After a 100 day strike, the settlement wage falls by 4 percent.

Union Wage Effects

We cannot easily calculate the union effect on wages, since we often do not know what a worker would earn outside the union.

We tend to rely on a calculation of a union wage gap, a percent difference between union and nonunion wages

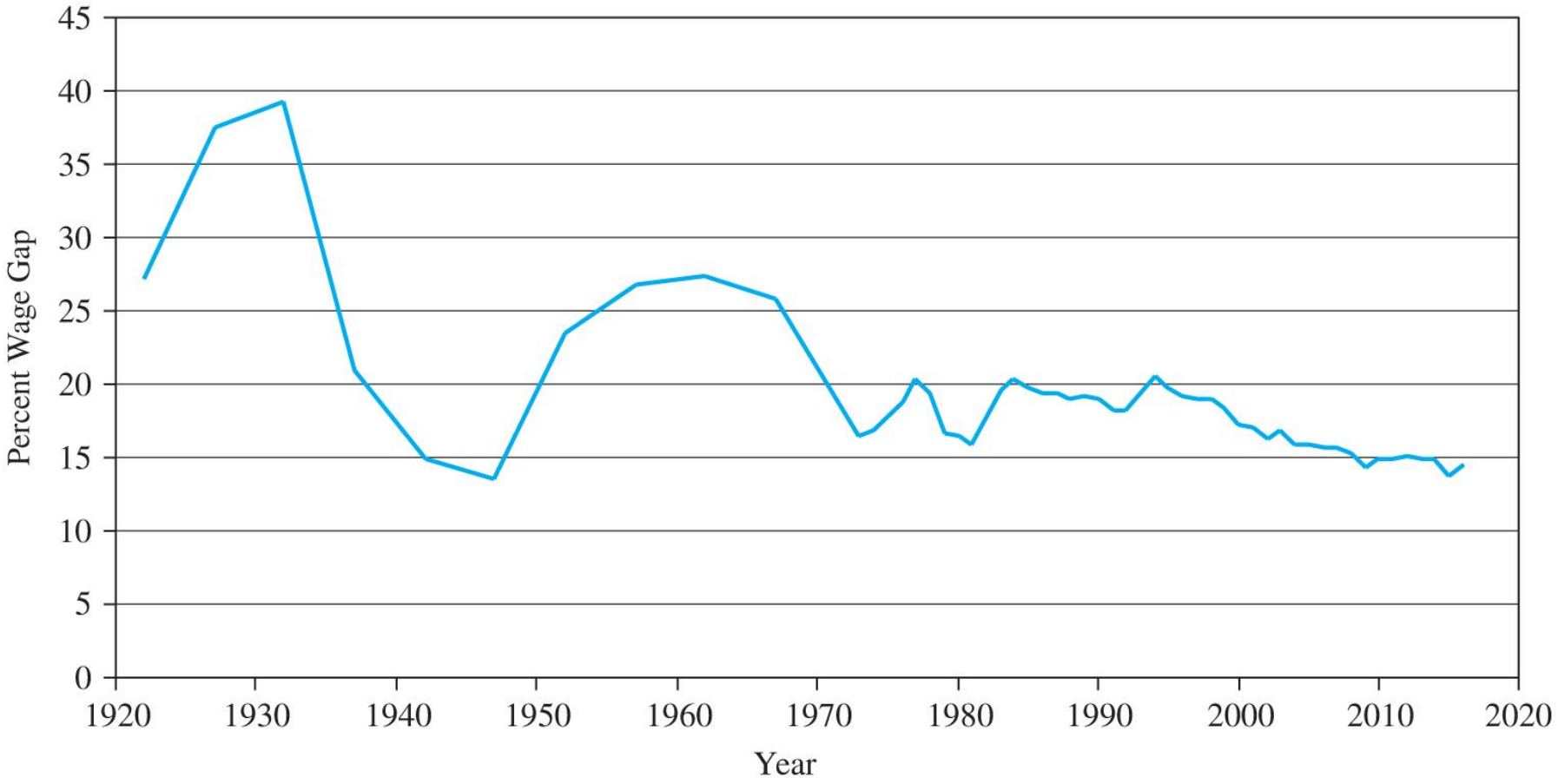
The Union Wage Gap

Union wage gap = $D = (\hat{w}_U - \hat{w}_N) / \hat{w}_N$

The union wage gap has fluctuated greatly over time, but since the 1970s it has hovered between 15 and 20 percent. In 2007, the average union wage gap was estimated to be 16 percent.

The union wage gap overestimates the union wage gain, because a typical worker in a union job will be more productive than workers in a nonunion job. (Skimming)

Wage Gap Between Union and Nonunion Workers, 1920-2016



Threat and Spillover Effects

The existence of a union sector has two side effects on the nonunion sector.

- Threat effects involve nonunion firms offering higher wages to reduce incentives of workers to unionize. (The threat effect leads the union wage gap to be underestimated.)
- Spillover effects result when workers unemployed in the union sector enter the nonunion sector, thus increasing the supply of labor and decreasing nonunion wages. (The spillover effect leads the union wage gap to be overestimated.)

Unions and Wage Dispersion

The dispersion of wages in the unionized sector is 25 percent less than the dispersion of wages in the nonunionized sector.

Unionized firms offer a lower payoff to education than nonunionized firms.

Unions flatten the age-earnings profile.

Unions and Fringe Benefits

The fringe benefits package received by union workers is generally worth more than the package received by nonunion workers.

The "union compensation gap" may be 2 or 3 percentage points higher than the union wage gap.

Non-Wage Effects of Unions

Unions give workers an option of voicing problems through a formal grievance procedure, instead of exiting the firm when they are unhappy.

This implies that worker turnover should be lower in unionized firms.

As labor turnover declines, worker productivity increases.

Profits rise but not enough to cover the increased labor costs.

Policy Application: Public Sector Unions

Most studies report that the union wage gap in the public sector is on the order of 5 to 10 percent.

There is evidence that some public-sector unions reduce productivity.

Public-sector unions often choose (or are mandated to choose) *binding arbitration* as a way of resolving collective bargaining disputes.