Unions

1 Trends and Legislation

Discuss Table 13.2 (v.6, p 477) and Table 12.2 (v.2, p 369)

2 Level of Unionization

A. Supply curve
   1) Costs of organizing
      a) Right to work laws
      b) Picketing rules
   2) Upward sloping

B. Demand curve
   1) Profits to be gained
      a) Type of industry
      b) Business cycle
   2) Union dues

C. Discuss shifts
   1) Taft-Hartley Act
   2) Increase in govt benefits
   3) Foreign competition

3 Union Objective

A. Possibilities
   1) Total wage bill

\[
\max_w wL(w).
\]

   a) How is this allocated?
   b) Who is in the union?

2) Total wage bill to older workers
3) Probability of reelection of officers
4) Job security

3.1 Example

Union wants to maximize wage bill and gets to pick \( w \); firm picks \( L \) to maximize profits. So the union’s problem is

\[
\max_w wL \quad \text{st} \quad L = \arg \max \pi = pf(L) - wL.
\]
The firm’s FOC is
\[ \frac{\partial \pi}{\partial L} = pf'(L) - w = 0 \]
so \( w = pf'(L) \).

So we can rewrite the union’s problem as
\[ \max_L pf' (L) L. \]

The union’s FOC is
\[ pf'' (L) L + pf' (L) = 0. \]

Consider the special case where
\[ f (L) = L^\alpha, \quad 0 < \alpha < 1. \]

Then, the union’s FOC becomes
\[ p\alpha (\alpha - 1) L^{\alpha-2} + p\alpha L^{\alpha-1} = 0 \]
\[ p\alpha^2 L^{\alpha-1} = 0 \]
which implies setting \( L = \infty \) and \( w = 0 \). What if we add unemployment insurance to the story? Let \( L \) be the size of the union, \( E \) be the union members employed, \( w \) be the wage paid to employed union members, and \( u \) be the unemployment insurance benefit paid to unemployed union members. So now think of the union’s problem as
\[ \max_E [wE + u (L - E)] \]
\[ \text{st} \ w = pf' (E). \]

The problem can be rewritten as
\[ \max_E [pf' (E) E + u (L - E)], \]
and the FOC is
\[ pf'' (E) E + pf' (E) - u = 0. \]

If
\[ f (L) = L^\alpha, \quad 0 < \alpha < 1, \]
then the FOC becomes
\[ p\alpha^2 E^{\alpha-1} - u = 0 \Rightarrow \]
\[ E = \left( \frac{u}{p\alpha^2} \right)^{\frac{1}{\alpha-1}}. \]
Think about comparative statics.

Now, what if the firm fires all of the union workers and hires the unemployed at a lower wage? What if the firm offers workers a little less with no union and no union dues?

2) Other methods used by unions
   a) Featherbedding
   b) Other rules restricting substitutability of labor
   c) Import quotas and tariffs
   d) Licensing and restricted apprenticeship programs
   e) Union shops
      Discuss free rider problem

4 Strikes

Model of strike duration: See Figure 1

Why do the curves converge (learning, financial constraints)
Equilibrium occurs where the two curves intersect at the time they intersect.

Why don’t the two sides anticipate the equilibrium and agree to the equilibrium wage at time 0?

5 Union Effects

A. See Figures 2 and 3 and discuss
B. Finer points
   1) Some may remain in the union sector to wait for a job
      a) Why can’t you wait while you work in the non union sector?
      b) If you do wait, then workers move over until the expected wages are equal.
   2) Nonunion firms may raise wages to avoid unionization.
   3) What is the measure of benefits of unions?
C. Union effect on productivity
   1) Traditional: lowers productivity, mostly through work rules
   2) Freeman and Medoff: the union raises productivity thru increased morale, lower quits, better teamwork, etc
   3) Why don’t firms employ the same rules if they raise productivity?