

Market Structure and the Min

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A One factor competitive benchmark (reprise)

- As before, the one-factor setup is derived from two:

$$q = F(K, L)$$

$$f(L) \equiv F(\bar{K}, L); f'(L) > 0; f''(L) < 0$$

- When firms are price-takers in goods and factor markets, we have:

$$\pi(L) = pf(L) - wL$$

with π max f.o.c.'s:

$$\begin{aligned} pf'(L) &= w \\ MR &= MC \end{aligned}$$

P-comp ... on Not

- Perfect competition means firms are everywhere *price-takers*, that is: prices are parametric in product and factor markets
- Classic deviations: (a) prices not parametric in product markets (monopoly); (b) prices not parametric in factor markets (monopsony)

B Who's Got the Power?

Power in the product market

- *Market power* means the employer faces downward sloping demand instead of perfectly elastic, so $p(q) = D^{-1}(q)$ is what individual firms react to
- The monopolist's π max problem:

$$\pi(L) = D^{-1}[f(L)]f(L) - wL$$

- f.o.c.

$$pf'(L) + p'(q)f'(L)f(L) - w = 0$$

The derivative of $D^{-1}(q)$ is $1/D'(p)$, so we have

$$pf'(L) + \frac{q}{D'(p)}f'(L) = w$$

- Simplify

$$f'(L) \left[1 + \frac{1}{\eta} \right] = \frac{w}{p},$$

where $\eta = \frac{D'(p)p}{q}$. This is an MR=MC type relation. We say: the monopolist sets MR equal to the wage (DRAW THIS)

- Implications:

1. No self-respecting (i.e., profit-maximizing) monopolist will be found where where $|\eta| < 1$ [Why?], so demand must be at least unit elastic. Therefore,

$$0 < 1 + \frac{1}{\eta} < 1$$

Thus, the monopolist recognizes that MR is attenuated by the need to lower prices to sell the extra output produced by additional workers, but high prices don't kill all his demand (DRAW THIS).

2. We get p-comp as a special case when

$$\eta = -\infty$$

- This model seems to miss something fundamental about product market power. *Would Alitalia and El Al really employ more pilots and crew if markets for flights from Logan to FCO and TLV were competitive?*

Power in the factor market

- *Market power* means the employer faces upward sloping instead of perfectly elastic supply, so $w(L) = S^{-1}(L)$
- The monopsonist's π max problem:

$$\pi(L) = pf(L) - S^{-1}(L)L$$

- f.o.c.s

$$pf'(L) - [S^{-1}(L) + Lw'(L)] = 0$$

- Re-arrange:

$$pf'(L) \left[w + \frac{L}{S'(w)} \right] = 0$$

$$pf'(L) = w \left[1 + \frac{1}{\epsilon} \right] > w$$

again, an MR=MC type relation. Here the marginal factor cost (MFC) exceeds the wage because of the need to raise wages to hire more workers (we pay inframarginals this higher wage too). [Is that bad for the monopsonist?] We say: the monopsonist sets MR equal to MFC (DRAW THIS)

- Implications:

1. A monopsonist exploits the opportunity to decrease wages as employment falls (in fact, he *exploits* his workers - how come?)
2. We get p-comp as a special case when

$$\epsilon = \infty$$

3. The exploitative monopsonist makes money yet never sleeps easy - he'd always like to hire more workers at current wages. Monopolists can be heard bellyaching about "labor shortages." [DRAW THIS]

- Classical monopsony is rare. But it's enough for an employer to have *some* market power for monopsony-related policy implications to go through (see, e.g. CK's M&M or Manning, 2003). *Speak truth to monopsonistic power, baby: it's just a matter of upward-sloping supply!*

C Monopsony and the Min

- Minimum wage effects are often taken as a litmus test for whether the labor market is competitive
- Some say: most employers are small, so must pay the going wage. Others note the pervasive presence of recruiting bonuses and the like; this is the Red Badge of Market Power
- If the labor market is competitive, the min moves us back along downward sloping demand; if not, all bets are off (DRAW THIS)
- The evidence we have on the min comes from a mixture of time series and diffs-in-diffs style analyses; we'll look briefly at a classic study
- The debate continues: see recent contributions by Dube, Meer and West, Neumark and Wascher, among others. Much of this is around the appropriate control group, the fundamental econometric concern in this context

Angrist, Joshua D., and David P. Card. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *The American Economic Review* 84, no. 4 (1994): 1367-1390.

See Card, David and Alan B. Krueger. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *The American Economic Review* 84, no. 4 (1994).

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