9 Monopsony

Practice Question 23. If the monopsony faces a supply curve of

$$p = 10 + Q$$

and has a demand curve of

$$p = 50 - Q$$

what are the equilibrium quantity and price in the output market? How does this equilibrium differ from the competitive equilibrium?

Solutions: The firm sets marginal revenue equal to marginal expenditure.

$$10 + 2Q = 50 - 2Q$$

$$\Rightarrow Q^* = 10, \quad p^* = 50 - 10 = 40$$

The competitive equilibrium is obtained by setting supply equal to demand

$$10 + Q = 50 - Q$$

$$\Rightarrow Q = 20, \quad p = 50 - 20 = 30$$

Practice Question 24. A firm is a monopoly in the output market and a monopsony in the input market. Its only input is the finished good, which it buys from a competitive market with an upward-sloping supply curve. The firm sells the same good to competitive buyers in the output market.

(a) Determine its profit-maximizing output. What price does it charge in the output market? What price does it pay to its suppliers?

(b) Compare the equilibrium in a market in which a firm is both a monopoly and a monopsony to the competitive equilibrium.

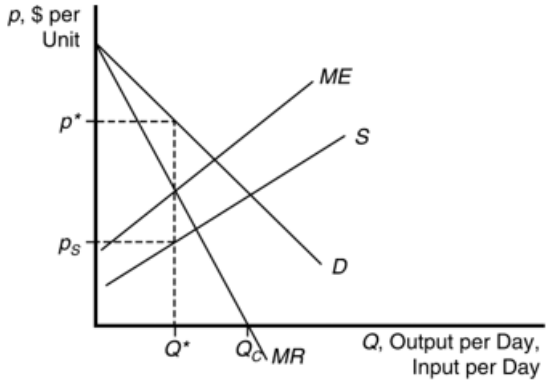
(c) Compare the equilibrium quantity and price in two markets: one in which a firm is both a monopsony and a monopoly and one in which the firm buys inputs competitively but has a monopoly in the output market.

(d) Compare welfare in a market where a firm is both a monopsony and a monopoly to welfare in markets in which the firm has a monopsony in the input market but acts as a price taker in the output market.

Solutions:

(a) See the following figure. As a monopolist/monopsonist, the firm sets marginal revenue equal to marginal expenditure. Output price is p^*, and suppliers are paid p_S. Output is Q^*, which is also the amount of inputs purchased.

(b) See the figure in the previous question. The competitive equilibrium is Q_C, where the supply curve intersects the demand curve. This can occur by simply eliminating the monopolist/monopsonist. The competitive supply market sells directly to the final output market. The price to the supplier of the good goes up, and the price in the output market goes down.



(c) For the monopoly/monopsony solution, see the above figure. Using the same graph, the solution for the quantity and price paid to suppliers for a monopoly that buys inputs competitively is where $MR = S$. The price the product is sold at can be found where q^* (the quantity solution) intersects the demand curve. Thus, price paid to suppliers and quantity bought is greater than the monopsony/monopoly case, and price paid by buyers is lower.

(d) See the following figure. If the output market is competitive, the monopsonist buys q_m. The monopsonist pays his supplier p_4 and receives p_3 per unit sold. The deadweight loss is I. If the monopsonist is also a monopolist, the quantity is reduced to q_{mm}, and the deadweight loss is increased by areas P, G, H, K, and Q. Price paid by the monopolist/-monopsonist goes down, and price received on the market goes up as his welfare increases by L, M, C, and D but decreases by G, H, and K. Consumer surplus and supplier surplus both decrease.