10.5 Monopsony

So far our discussion of market power has focused entirely on the seller side of the market. Now we turn to the *buyer* side. We will see that if there are not too many buyers, they can also have market power and use it profitably to affect the price they pay for a product.

First, a few terms. *Monopsony* refers to a market in which there is a single buyer. An *oligopsony* is a market with only a few buyers. With one or only a few buyers, some buyers may have *monopsony power*—a buyer's ability to affect the price of a good. Monopsony power enables the buyer to purchase the good for less than the price that would prevail in a competitive market.

Suppose you are trying to decide how much of a good to purchase. You could apply the basic marginal principle—keep purchasing units of the good until the last unit purchased gives additional value, or utility, just equal to the cost of that last unit. In other words, on the margin, additional benefit should just be offset by additional cost.

Recall from Chapter 4 that a person's demand curve measures marginal value, or marginal utility, as a function of the quantity purchased. Therefore, your *marginal value* schedule is your *demand* curve for the good. But your marginal cost of buying additional units of the good depends on whether you are a competitive buyer or a buyer with monopsony power.

Suppose you are a competitive buyer, which means that you have no influence over the price of the good. Then the cost of each unit you buy is the same, no matter how many units you purchase—it is the market price of the good. Figure 10.12a illustrates this. In that figure the price you pay per unit is your *average expenditure* per unit, and it is the same for all units. But what is your *marginal expenditure* per unit? As a competitive buyer, your marginal expenditure is equal to your average expenditure, which in turn is equal to the market price of the good.

Figure 10.12a also shows your marginal value schedule (i.e., your demand curve). How much of the good should you buy? You should buy until the marginal value of the last unit is just equal to the marginal expenditure on that unit. So you should purchase quantity Q^* at the intersection of the marginal expenditure and demand curves.

We introduced the concepts of marginal and average expenditure because they will make it easier to understand what happens when buyers have monopsony power. But before considering that situation, let's look at the analogy between competitive buyer conditions and competitive seller conditions. Figure 10.12b shows how a perfectly competitive seller decides how much to
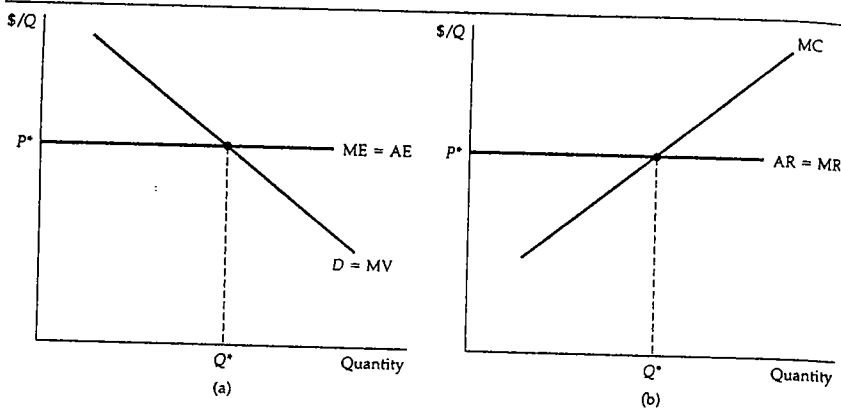
FIGURE 10.12   Competitive Buyer Compared to Competitive Seller.   The competitive buyer in (a) takes market price P^* as given. Therefore, marginal expenditure and average expenditure are constant and equal, and the quantity purchased is found by equating price to marginal value (demand). The competitive seller in (b) also takes price as given. Marginal revenue and average revenue are constant and equal, and quantity sold is found by equating price to marginal cost.

produce and sell. Since the seller takes the market price as given, both average and marginal revenue are equal to the price. The profit-maximizing quantity is at the intersection of the marginal revenue and marginal cost curves.

Now suppose that you are the *only* buyer of the good. You again face a market supply curve, which tells you how much producers are willing to sell as a function of the price you pay. Should the quantity you purchase be at the point where your marginal value curve intersects the market supply curve? No. If you want to maximize your net benefit from purchasing the good, you should purchase a smaller quantity, which you will obtain at a lower price.

To determine how much to buy, set the marginal value from the last unit purchased equal to the marginal expenditure on that unit.[13] But note that the market supply curve is not the marginal expenditure curve. The market supply curve shows how much you must pay *per unit*, as a function of the total num-

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[13]Mathematically, we can write the net benefit NB from the purchase as $NB = V - E$, where V is the value to the buyer of the purchase, and E is the expenditure. Net benefit is maximized when $\Delta NB/\Delta Q = 0$. Then

$$\Delta NB/\Delta Q = \Delta V/\Delta Q - \Delta E/\Delta Q = MV - ME = 0$$

so that $MV = ME$.

ber of units you buy. In other words, the supply curve is the *average expenditure* curve. And since this average expenditure curve is upward sloping, the marginal expenditure curve must lie above it because the decision to buy an extra unit raises the price that must be paid for *all* units, not just the extra one.[14]

Figure 10.13 illustrates this. The optimal quantity for the monopsonist to buy, Q_m^*, is found at the intersection of the demand and marginal expenditure curves. And the price that the monopsonist pays is found from the supply curve; it is the price P_m^* that brings forth the supply Q_m^*. Finally, note that this quantity Q_m^* is less, and the price P_m^* is lower, than the quantity and price that would prevail in a competitive market, Q_c and P_c.
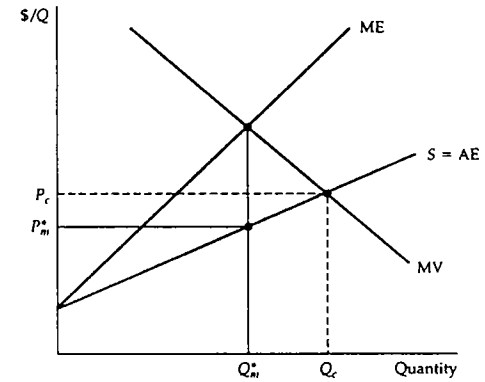

FIGURE 10.13   Monopsonist Buyer.   The market supply curve is the monopsonist's average expenditure curve AE. Average expenditure is rising, so marginal expenditure lies above it. The monopsonist purchases quantity Q_m^* where marginal expenditure and marginal value (demand) intersect. The price paid per unit P_m^* is then found from the average expenditure (supply) curve. In a competitive market, price and quantity, P_c and Q_c, are both higher. They are found at the point where average expenditure (supply) and marginal value (demand) intersect.

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[14] To obtain the marginal expenditure curve algebraically, write the supply curve with price on the left-hand side: $P = P(Q)$. Then total expenditure E is price times quantity, or $E = P(Q)Q$, and marginal expenditure is

$$ME = \Delta E/\Delta Q = P(Q) + Q(\Delta P/\Delta Q)$$

The supply curve is upward sloping, so $\Delta P/\Delta Q$ is positive, and marginal expenditure is greater than average expenditure.