

**Figure 1A.3** Competitive labor market equilibrium before and after a shift in the supply curve

### Focus

## The Intrinsic Value Paradox: Are Diamonds and Water Like Lawyers and Child Care Workers?

The word VALUE, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called “value in use,” the other, “value in exchange.” The things which have the greatest interest in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use. Nothing is more useful than water: but it will purchase scarce any thing; scarce any thing can be had in exchange for it. A diamond, on the contrary, has scarce any value in use; but a very great quantity of other goods may frequently be had in exchange for it. (Adam Smith, *Wealth of Nations*, 1776, Book 1, Chapter IV)

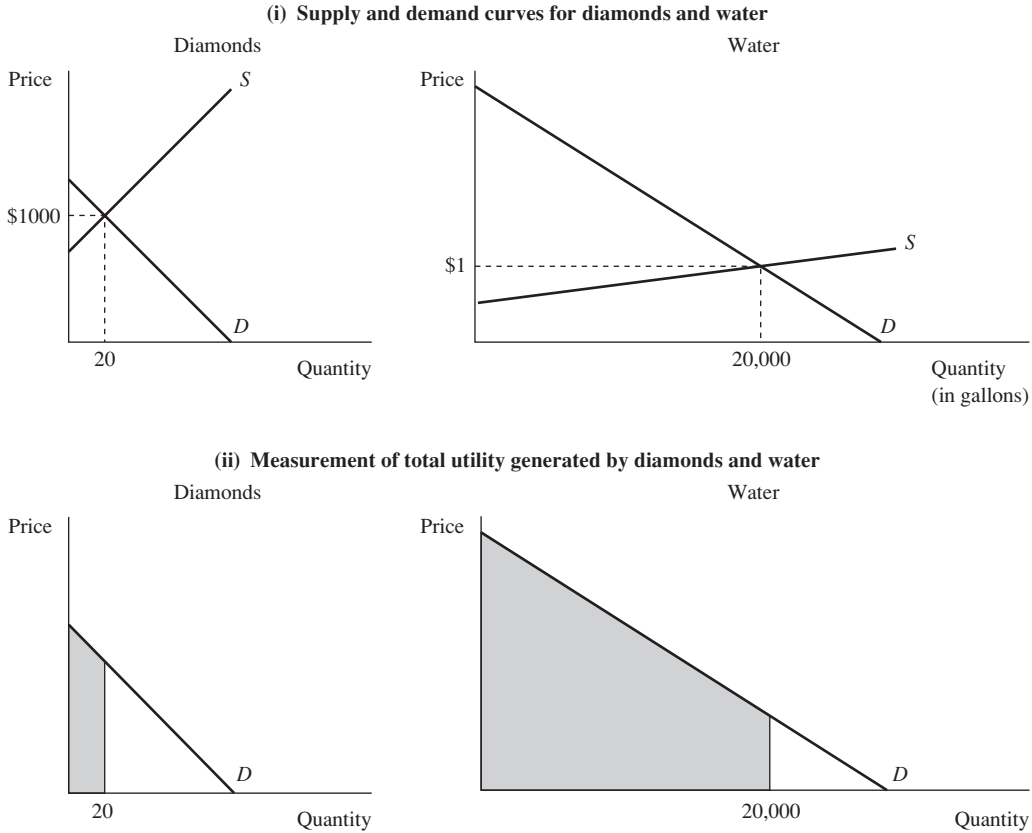
The problem of reconciling value in use and value in exchange, which Adam Smith noted but did not resolve, continued to puzzle economists well into the nineteenth century, until the distinction between total utility and marginal utility was drawn. When diamonds are inessential and water so essential to human life, why are diamonds so costly and water cheap? Part of the answer is on the supply, or cost side: diamonds are scarce and water plentiful. But the paradoxical part of the problem is explaining how this price difference is reconciled with the fact that people get more total utility from water than from diamonds (for, without water they would die). That is because price is affected on the demand side by marginal utility rather than total utility.

Compare the markets for diamonds and water as shown in Figure 1A.4 (i). Diamonds have a high, steep supply curve, representing the high cost of producing diamonds and the rising cost of finding additional diamonds. Water has a low, flat supply curve, representing the low unit cost of producing water to most communities and showing that increasing the volume of water does not generally raise the unit cost by much. The demand curve for water is higher than for diamonds, but it intersects the supply curve for water at a much lower price and greater quantity than the intersection for diamonds.

A rough measure of total utility is the area under the demand curve up to the point of market equilibrium. This is shown by the shaded areas in Figure 1A.4 (ii). It is clear that the market for water generates much greater total utility than the market for diamonds (think how many more people drink water than own diamonds). But the marginal utility of the last unit of water consumed is much lower than the marginal utility of the last diamond purchased. In the case of perfectly competitive markets, the ratio of the marginal utilities ( $MU$ ) is equal to the ratio of the market prices ( $P$ ):

$$\frac{MU_{\text{water}}}{MU_{\text{diamonds}}} = \frac{P_{\text{water}}}{P_{\text{diamonds}}} = \frac{1}{1000} \text{ (in this example)}$$

Now consider whether this reasoning is applicable to labor markets. One often hears people assert that various occupations are not paid in accordance with their value to society; for instance, that people working with children, such as teachers and child caretakers, are paid



**Figure 1A.4** Markets for diamonds and water

very little relative to the value of their jobs (2005 median weekly earnings for preschool and kindergarten teachers: \$521), while other people, such as lawyers, are overpaid relative to the value of their work (2005 median weekly earnings: \$1609).<sup>3</sup> Consider whether Figure 1A.4 could be relabelled “lawyers” instead of diamonds and “child care workers” instead of water, and whether this is a useful analysis of the situation that leads to such different wages for the two occupations.

Paradoxically, this analysis implies that one way to increase the value of child care workers, and thereby

increase their wages, is for people who care about child care to become lawyers instead of child care workers. By reducing the supply of child care workers and increasing the supply of lawyers, the wages will be driven up in the child care market and down in the market for lawyers. Imagine being lost in the middle of the desert while wearing a diamond ring. If you had been in the desert for awhile and were then given the opportunity to buy a gallon of water, you would be willing to trade your ring for the water. In this situation, the marginal utility of water would exceed that of the diamond.

### Noncompetitive Markets—Monopoly and Monopsony

In this section, we will consider two forms of noncompetitive markets: *monopoly*, the case of one seller and many buyers; and *monopsony*, the case of one buyer and many sellers. In each case, if only one party exists on one side of the market, that party can realize gains above the usual level available in a competitive market. These gains are achieved at a cost both to the other side of the market and to society in general.