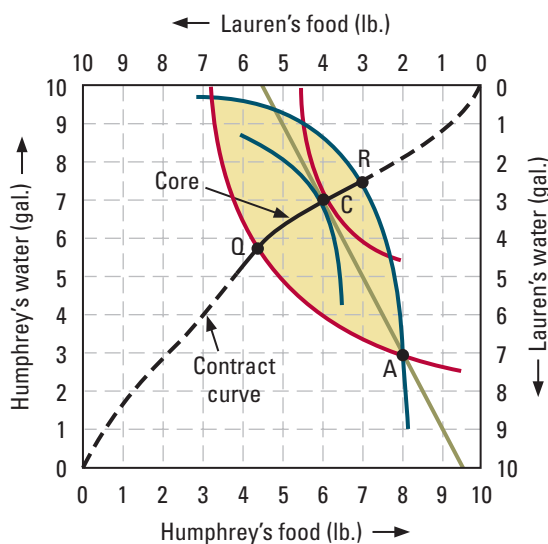## BARGAINING AND COMPETITIVE MARKETS

According to theory, competitive buyers and sellers take the market price as given: there's no room for bargaining. Yet in many markets, haggling over price is common: think about buying or selling a used car, purchasing jewelry from a street vendor, or discussing compensation with your employer. Strictly speaking, in these markets, buyers and sellers aren't price takers. Does that mean we need to use a different model of resource allocation to describe these markets? Not necessarily. Under the right conditions, bargaining between buyers and sellers simply guides the economy to a competitive general equilibrium.

Let's think about the likely result of negotiation between Humphrey and Lauren. Look at Figure 16B.1. As in Figure 16.10 on page 595, point A is the endowment and point C is the competitive equilibrium allocation. We've included the consumers' equilibrium budget line (in green) and the two indifference curves from Figure 16.10. We've also added the contract curve from Figure 16.13 on page 599 (part of it dashed), as well as two new indifference curves running through point A (one for Humphrey and one for Lauren).

Where will negotiation lead Humphrey and Lauren? We can certainly rule out points that are off the contract curve. Were Humphrey and Lauren to entertain any such allocation, one of them could propose an alternative that would make both better off. We can also rule out points on the contract curve to the left of point Q. Humphrey would never

Figure 16B.1

Competitive Markets versus Bargaining.
The portion of the contract curve that lies between points Q and R is known as the core. The allocations in the core are all efficient, and both Humphrey and Lauren prefer them to their endowments. Through negotiation, Humphrey and Lauren would select a point in the core. The negotiated result will be closer to point R or point Q depending on whether Humphrey or Lauren is the better negotiator. The competitive equilibrium allocation always lies in the core, so it's one possible outcome of negotiation.

agree to one of those because he likes his endowment better. Likewise, we can rule out points on the contract curve to the right of point R. Lauren would never agree to one of those because she likes her endowment better.

That leaves us with the solid portion of the contract curve, between points Q and R. Humphrey and Lauren could settle on any one of those points. The outcome depends on their bargaining skills. The result will be closer to point R or point Q depending on whether Humphrey or Lauren is the more skillful negotiator.

> The **core** of an economy contains all of the allocations that consumers are likely to settle on through bargaining.

If an allocation is efficient, and no consumer or group of consumers can do better on their own, we say that it belongs to the **core** of the economy. The core contains all the allocations that consumers are likely to settle on through bargaining. In Figure 16B.1, the core is the portion of the contract curve between points Q and R.

The competitive equilibrium allocation always lies in the core, as Figure 16B.1 shows. Since competitive equilibria are efficient, point C lies on the contract curve; and since Humphrey and Lauren will only trade to bundles that they like at least as well as their endowments, it must lie between points Q and R. So the competitive equilibrium allocation is one possible outcome of negotiation. As is clear from the figure, however, it needn't be the only possible outcome. In this example, the core contains many other allocations. Some of them, like points Q and R, differ considerably from the competitive equilibrium. point C. Is that always the case?

> The **core equivalence theorem** tells us that in very large economies, every allocation in the core is almost identical to a competitive equilibrium allocation.

As it turns out, the answer is no. Remember that Figure 16B.1 illustrates the core of an exchange economy with only two consumers. When we study competitive equilibria, we usually focus on large economies. Each buyer knows that there are many potential sellers, and each seller knows that there are many potential buyers. That knowledge limits how much each buyer is willing to pay and how little each seller is willing to charge. In fact, an important and difficult mathematical result, known as the **core equivalence theorem**, tells us that in very large economies, every allocation in the core is almost identical to a competitive equilibrium allocation. In other words, in very large economies, bargaining accomplishes exactly the same result as competition.