How Do Demand and Price Interact?
Lesson 5, Section 2

Most people's understanding of demand comes from their own experience as consumers. Consumers, after all, are the ones who decide what to buy and how much to spend. Demand, in this everyday sense, is whatever consumers decide they want. But how do consumers—how do *we*—make those decisions?

Consider this scenario.You are shopping for albums online, and you see that *Some Hearts* costs $15. Do you buy it? Would you be more likely to buy it if it were priced at $11? What about if it were priced at $18? If you respond the way economists expect you to, the lower the price, the more likely you would be to buy the album. This is a key idea in understanding the relationship between demand and price.

Demand: What We Are Willing and Able to Buy at Various Prices

Anyone who has ever gone shopping knows that making a purchase depends on two things. You have to be willing to buy the item in question, and you have to be able to pay for it.

Those two characteristics of consumers— willingness and ability—both matter to economists. You may want the Underwood album, for example, but if you don't have $15, you cannot buy it. You see a Rolling Stones album priced at $9, but you do not like the Rolling Stones enough to spend the money. For you to contribute to the demand for either album, you have to be both willing and able to buy.

What does it mean to contribute to the demand for something? Let's say that you do, after all, buy a copy of *Some Hearts* for $15. That one copy, at that one price, is what an economist would call your quantity demanded. **Quantity demanded** is the amount of a good or service that consumers are willing and able to buy at a specific price. If a different store were to charge $11 for *Some Hearts*, and consumers bought 30 copies, then that amount at that price—30 copies at $11—would be the quantity demanded.

When the quantities demanded at all the various prices at which a good is sold are added together, the result is demand. **Demand** is the amount of a good or service that consumers are willing and able to buy at all prices in a given period.

Demand is expressed in terms of a time frame, such as “per day” or “per week.” To say that consumers bought 315,000 copies of *Some Hearts* does not, to an economist, convey demand. But 315,000 copies purchased in three weeks is demand. In fact, it is enormous demand, and every consumer who bought *Some Hearts* during that period, at any price, contributed to it.

Using a Demand Schedule to Determine One Consumer's Willingness and Ability to Buy

Price is obviously important to consumers. How important is it? A simplified model of a market can show us how prices can influence consumers' buying decisions.

Suppose that Tyler is the sole consumer in a market with one product, tacos. Assume that the tacos sold in this market are all exactly alike. This is the *ceteris paribus*, or other-things-being-equal, assumption. Also assume that price is Tyler's only consideration. All other influences on Tyler's buying—and there could be many—are held constant.

Tyler eats tacos several times a week at a taquería, or taco stand, owned by Jasmine. One day Jasmine conducts a customer survey to find out how Tyler might react to a price change. The survey asks how many tacos per week Tyler would be willing and able to buy at various prices.

Figure 5.2A

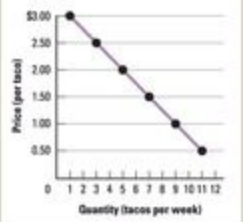
Graphing Individual Demand

A demand schedule and graph show how much of something consumers in a market are able and willing to buy at various prices. In this case, the market has just one consumer, Tyler.

- When plotted on a graph, the data from Tyler's demand schedule form a demand curve.
- Each point on the curve shows the relationship between price (on the vertical axis) and quantity demanded (on the horizontal axis).

Tyler's Demand Schedule

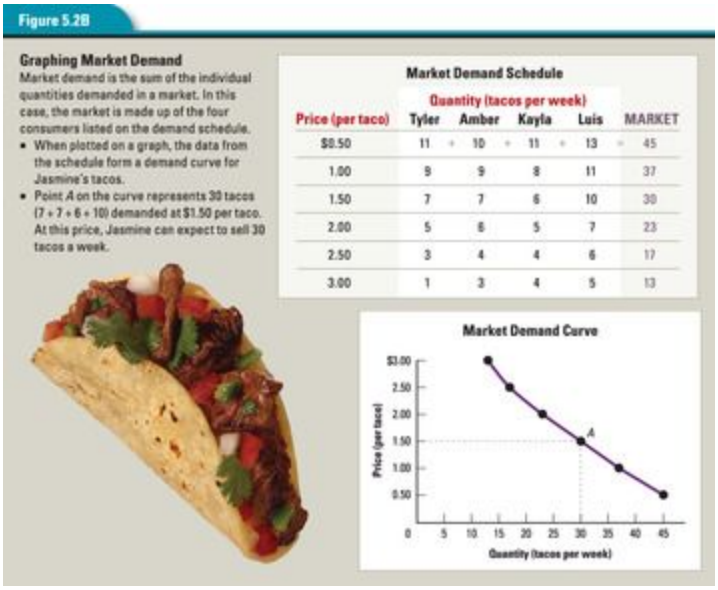
Price (per taco)	Quantity (tacos per week)
$0.50	11
1.00	9
1.50	7
2.00	5
2.50	3
3.00	1



The results of Jasmine's survey are shown in the table in Figure 5.2A. Economists call this kind of table a **demand schedule**. An individual demand schedule lists the quantities of a good that one person will buy at various prices. Tyler's demand schedule shows that at a price of $1.00, his quantity demanded is nine tacos. That is, he can be expected to buy nine tacos per week when the price is $1.00. Notice that as the price increases, the quantity of tacos that Tyler is willing and able to buy decreases.

The data from Tyler's demand schedule are plotted on the graph in Figure 5.2A. Each pair of variables in the demand schedule—quantity and price—is a pair of coordinates marking a point on the graph. The line that is formed by connecting the points is called a demand curve. A **demand curve** shows the relationship between price and the quantity that buyers are willing and able to buy. Put another way, a demand curve shows how price influences the quantity demanded. As the price changes, the quantity demanded moves up or down along the demand curve.

Notice that this demand curve happens to be a straight line. Demand curves can be straight or curved. As you might expect, this demand curve shows that Tyler is able and willing to buy a lot more tacos at $0.50 apiece than at $3.00 apiece.



Market Demand: The Sum of All Consumers' Willingness and Ability to Buy

In the real world, of course, Jasmine would need more than one customer to stay in business. Suppose she opens the doors of her taquería to the general public, a move that gains her three more customers: Amber, Kayla, and Luis. She now needs to consider the market demand for her tacos.**Market demand** is the sum of all the individual quantities demanded in a market. When economists refer to demand, they are usually talking about market demand.

Knowing market demand helps businesses make plans because it tells them how many goods all consumers will buy at various prices. To determine that broader demand, a business might track sales of a product at various prices, or a business owner might conduct a survey.

Jasmine again uses a survey to determine the demand for her tacos. A schedule of the data is shown in Figure 5.2B. It shows the sum of the quantities demanded at each price by each of the four consumers. This sum is the market demand for Jasmine's tacos.

The accompanying graph shows the same market demand data. Each point on the curve represents the quantity of tacos demanded at a particular price. As you might expect, there is a clear relationship between price and demand for Jasmine's tacos.

The Law of Demand: As Price Increases, Quantity Demanded Decreases

One thing is clear from both of the demand graphs you just looked at. As the price of tacos increases, the quantity demanded decreases. As the price decreases, the quantity demanded increases. Price and quantity demanded move in opposite directions. This inverse relationship between price and quantity demanded is so strong that economists refer to it

as the **law of demand**. Economist David Henderson calls the law of demand the “most famous law in economics, and the one that economists are most sure of.”

Why do price and quantity demanded move in opposite directions? The answer can be found in three factors that affect consumers' spending behavior.

The law of diminishing marginal utility. Sometimes a consumer has to decide whether or not to buy something, like a music album at a particular price. Other times, however, as the thinking-at-the-margin principle tells us, consumers are faced with the choice not of whether to buy, but of how much to buy. This raises the question of marginal utility.

How much utility, or satisfaction, is there in consuming “just one more”? The law of diminishing marginal utility tells us that with most goods and services, the more we have already consumed, the less satisfaction we are likely to get from consuming yet another additional unit. This explains why each helping of food you eat at an all-you-can-eat buffet is less enjoyable than the one before. Does this mean that people will not buy ever-larger quantities of a good or service? No, but it does imply that they will do so only if the price is low enough.

The income effect. Because of scarcity, people's incomes are limited. They have only so much money to spend. If the price of a good or service increases, they will not be able to continue to buy the same quantity as they did at the original price.

The substitution effect. Sometimes two different goods can satisfy the same want. Such products are called **substitute goods**. Rubber flip-flops, for example, can satisfy the same want as leather sandals for many people. What happens if the price of sandals increases relative to the price of flip-flops? At some point, people will substitute the cheaper good for the relatively more expensive one.

All three factors cause consumers to react in predictable ways to a change in the price of a good or service. As consumers buy more in response to a decrease in price—or less in response to an increase in price—the quantity demanded is said to “move along the demand curve.” Economists call this movement along the curve a **change in quantity demanded**. Only a change in price causes a change in quantity demanded.