# CHAPTER TWO

# Demand and Supply: An Introduction

## Overview Comments

This chapter covers one of the most important subjects in economics. We feel that the amount of time, effort, and patience put into developing the basic principles of demand and supply will pay great dividends for students later in the course. Also, unlike some other approaches, we have deliberately relegated the complexities of multiple curve shifts and other applications of demand and supply to another chapter.

While most of the material in this chapter is fairly standard, there are three areas which are treated a little differently from other approaches. First, we introduce the income and substitution effects early. Since we emphasize that the concept of demand involves both willingness and ability, it seemed a good opportunity to explain that the reason for the downward slope of the demand curve is that a lower price means both an increased willingness (the substitution effect) and ability (the income effect) to purchase. Second, the chapter moves deliberately and quickly to a discussion of equilibrium rather than first discussing what causes shifts in the two curves. We think this direct approach is more helpful for students who usually grasp the concept with little difficulty. Only after we have explored the idea of equilibrium and the implications of disequilibrium do we look at the determinants of demand and supply and the effects of their change. Third, we believe that it short-changes the students to show the results of a change in equilibria without explaining how the market gets there. Therefore, when we do start curve-shifting we take great pains to demonstrate just how the market moves, in reaction to surpluses and shortages, from one equilibrium to another.

Although we don't personally use algebra to teach demand and supply in our own classes, we recognize that some instructors find this an effective approach and so we have added a short Appendix on the algebra of demand and supply.

# Suggested Approaches and Helpful Hints

As we mentioned, we think it's essential to move to equilibrium as quickly as possible so that students are immediately made aware that the price is determined by both the demand and the supply. If this is not done you will find that you are moving curves about in isolation and showing an increase in demand which impacts on nothing: a cause looking for an effect. We find that students can grasp the concepts of equilibrium, surpluses and shortages fairly easily so we get them to this point early.

Students need to be aware that the price of the product is not always the most important factor that affects consumer spending. At times, incomes, prices of related products and so on may have more significance. Yet we put price at the forefront for two reasons. First, it often is the most important factor. Second, it is the centre of focus for our analysis because it is the one factor which links producers and consumers and which influences the actions of both groups.

It is probably useful to point out to students that some of the demand curves in this chapter are not straight lines. This is because they are plotted from data that is presented in a table. This helps to emphasize the link between a demand schedule and a demand curve and reminds us that demand and supply curves are not always linear.

One of the problems that many students have is the obvious one of confusing demand with quantity demanded (and supply with quantity supplied). The problem is only cured through repeated practice. It's a good idea to keep reminding students that the terms demand and supply do not relate to specific quantities but to whole ranges of prices and quantities. We find that while they often respond to the concept of demand, they will sometimes continue to use the term supply as a synonym for production or output.

Another problem for students is that, understandably, they draw on examples where the firm rather than the market determines the price of the product. Although we briefly mention in the text that the demand/supply model works best in the context of perfectly competitive markets, it is a shame to use only examples of commodity markets. Once students grasp the basics, they are usually eager to put the principles to work analyzing many different types of markets with which they are familiar, and these include markets which are anything but competitive and where the producers are usually price makers. We are hesitant to curb such enthusiasm so early in the game. On the other hand, you need to tread carefully when dealing with non-competitive markets. Perhaps you could explain, as we do early in Chapter 3 with the example of the over-priced automobile, that while the model works exactly as we suggest only in perfectly competitive markets, that doesn't mean that it doesn't have application to other markets.

# Answers to *Problems for Further Study*

**1.** **c, d** and **e** are the circled letters

**2**. Graph A: increase in demand; increase in quantity supplied
Graph B: increase in supply; increase in quantity demanded

**3.** a) price **down** and quantity traded **down**
b) price **up** and quantity traded **up**
c) price **down** and quantity traded **down**
d) price **up** and quantity traded **up**

**4.** a) supply; increased
b) demand; decreased
c) supply; decreased
d) demand; increased

**5.** Demand refers to the whole range of quantities that are demanded at various prices as depicted by a demand schedule or demand curve. The quantity demanded refers to a particular quantity at a particular price, i.e. it is a point on a demand curve.

**6.** Shortages cause competitive bidding among buyers of a product. The result will be that the price will be bid up and will continue to rise until the shortage disappears.

**7.** **Table 2.19 (completed)**

| | **D** | **S** | **P** | **Q** |
|---|---|---|---|---|
| a | ↑ | - | ↑ | ↑ |
| b | ↑ | - | ↑ | ↑ |
| c | - | ↓ | ↑ | ↓ |
| d | ↓ | - | ↓ | ↓ |
| e | ↓ | - | ↓ | ↓ |
| f | ↑ | - | ↑ | ↑ |

**8.** Change the second sentence to: "The **quantity demanded** for houses decreases when the price increases."

**9.** The first determinant of market demand is consumer preferences, i.e. the tastes and fashions of consumer. The second is consumer incomes. For a normal product, higher incomes leads to a higher demand; on the other hand, for an inferior product higher incomes lead to a lower demand. The third determinant is the prices of related products, which include substitute products, and complementary products. The demand will be higher if the price of a substitute increases or the price of a complement decreases. The fourth determinant is expectations of the future. The demand will increase if future prices or incomes are expected to be higher or a future shortage is anticipated. The final determinant is the population. The market demand for a product

may be affected if there is a change in the size or in the income or age distribution of the population.

**10**. An increase in the demand for a product will initially lead to a shortage. As a result competition among the buyers will cause the price to increase. The effect of an increase in the price will be a fall in the quantity demanded and an increase in the quantity supplied. Both factors will help to eliminate the shortage. Eventually both the price and the quantity traded of the product will have increased.

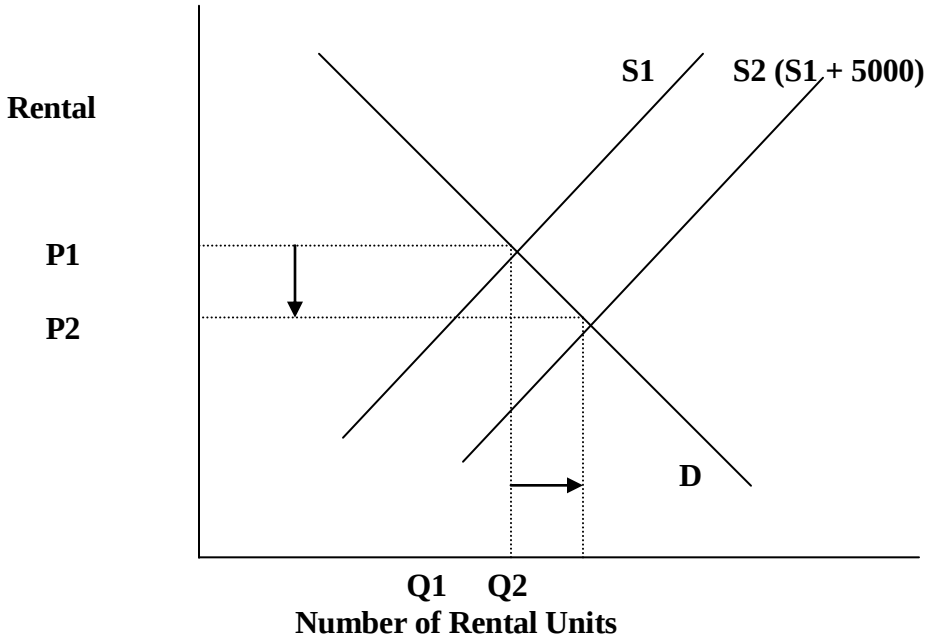
**11.** Five possible causes are:

- an increases in the price of resources used;
- an increase in business taxes;
- an increase in the price of a substitute in production;
- the expectation of suppliers that there will be higher prices in the future;
- a decrease in the number of suppliers.

Five specific effects (in order) are:

- a shortage;
- a price increases;
- an increase in the quantity supplied;
- a decreases in quantity demanded;
- a decrease in the quantity traded.

**12.**




# APPENDIX TO CHAPTER TWO

# Answers to *Problems for Further Study*

**1.** P = 6; Q = 28.

**2.** a) P = 15; Q = 25.

b) Shortage of 12.

c) P = 17; Q = 27.

**3.** a) $Q^d = 244 - 4P$

b) Qs = –8 + ½ P

c) P = 56; Q = 20

**4**. a) $Q^d = 675 - 100P$ (or $P = 6.75 - 0.01Q^d$).

b) $Q^s = 50P$ (or $P = 0.02Q^s$)

c) P = 4.5; Q = 225

**5**. a) shortage of 60. ($Q^d = 185$; $Q^s = 125$)

b) surplus of 24. ($Q^d = 164$; $Q^s = 188$

**6**. a) P = 70. (Solve the equation: 380 = 100 + 4P)

b) $Q^d = 310$. (Plug 70 into the demand equation.)

c) Surplus of 70. ($Q^d = 310$ and $Q^s = 380$).