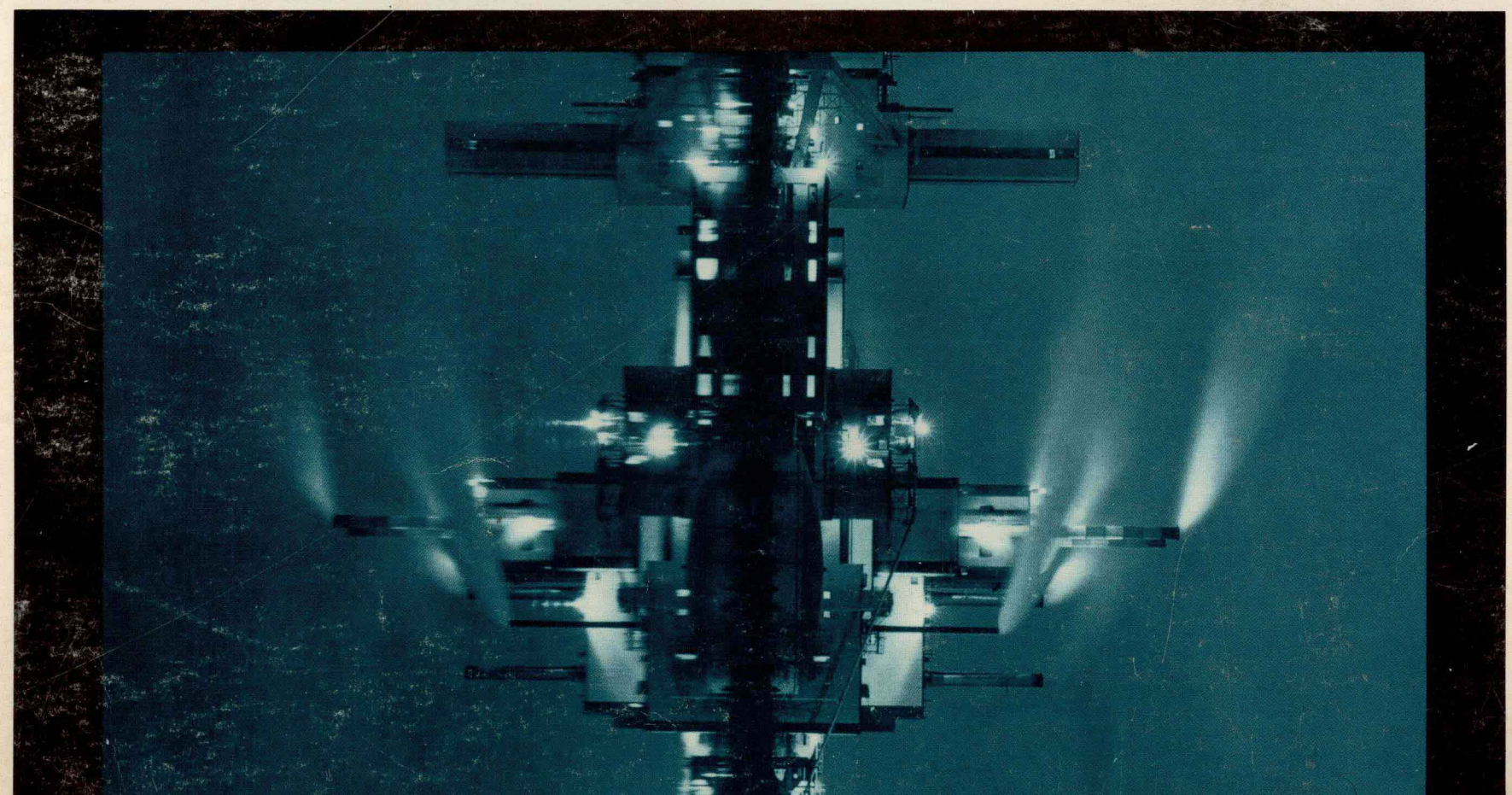
STUDY GUIDE

Daniel M. Gropper • David W. Rasmussen • Ralph J. Charkins

ELEMENTS OF ECONOMICS

David W. Rasmussen

Charles T. Haworth



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to accompany

ELEMENTS OF ECONOMICS

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Preface

This workbook is designed to help you understand the material presented in the text by providing an opportunity for additional review, problems that require the application of basic principles, and sample test questions for self examination. Each chapter of the workbook is coordinated with the corresponding text chapter and contains certain standard features. The learning objectives tell you what you should be able to accomplish after you finish each chapter. The introduction to key concepts describes and presents key terms and ideas of the text. You should first read the introduction and see if you understand the key concepts. If you don't, go over this section again after you have finished all of the questions and problems. The purpose of the true/false and multiple-choice questions and answers is to teach you principles that you didn't learn in the text. If you can answer the questions correctly but can't give an explanation for the answers, or don't understand them, then you need to go back to the textbook and review the relevant sections. The problems/projects/thought section is to help you go beyond the true/false or multiple-choice questions to issues that are more complex.

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CHAPTER 1

WHAT IS ECONOMICS?

LEARNING OBJECTIVES

Chapter 1 describes the subject matter of economics. After studying Chapter 1 you should be able to:

1. define economics
2. define the concept of scarcity and relate it to unlimited wants and limited means
3. distinguish between microeconomics and macroeconomics
4. use the production possibilities curve to illustrate the concepts of scarcity, opportunity cost, and economic growth
5. distinguish between positive and normative economics

INTRODUCTION TO KEY CONCEPTS

Economics is essentially the study of how scarce goods are allocated to meet various needs; thus it is the study of choice. Microeconomics is the study of how the market mechanism allocates and distributes resources. Macroeconomics is the study of economic growth and stability. The production possibilities curve shows the choices available to the society as a whole, limited by the factors of production in the economy. The essential problem of economics is scarcity; it is scarcity that necessitates choice. An opportunity cost is incurred whenever a choice is made, this cost being the highest valued option given up when choosing an alternative. Economics is considered to be a social science, it thus uses generalized abstractions--theory--to gain understanding of the real world. Positive economics attempts to describe the world as it is, while normative economics describes things as they should be.

PROBLEMS/PROJECTS/THOUGHT

1. In a market economy, there is no individual or agency that decides how much of each good is to be produced as is done in a centrally planned economy. How does a market economy make sure there is enough of each good produced, but not too much?

2. How does the notion of scarcity in economics differ from the more common usage? Do you agree with the underlying assumptions about human behavior?

3. How does the economic concept of opportunity cost differ from accounting cost? Figure your opportunity cost of attending college this year. What should you include beyond the cost of books, tuition, etc?

4. a. Using the data below, construct a hypothetical production possibilities curve for the United States.

	United States	
	Consumer Goods	Military Goods
Units	10,000	0
	8,000	1,000
	6,000	2,000
	4,000	3,000
	2,000	4,000
	0	5,000

   b. What would happen to this production possibilities curve if the population of the United States fell?
   c. What would happen if vast reserves of oil were found in the Midwest?
   d. What is the opportunity cost of producing 1,000 military goods? What is the opportunity cost of producing 1,000 consumer goods?

TRUE/FALSE QUESTIONS

_____ 1. Economics deals with allocation of scarce resources.

_____ 2. Adam Smith said that the butcher, the baker, and brewer don't love their customers.

_____ 3. The study of microeconomics deals with the behavior of individual economic units, consumers and firms.

_____ 4. The factors of production are land, labor, and money.

_____ 5. Macroeconomics deals with the performance of the entire economy.

_____ 6. Normative economics describes how the world normally operates.

_____ 7. The principle of opportunity cost can be shown by a movement along the production possibilities curve.

_____ 8. The fallacy of composition demonstrates the problem of determining causation.

_____ 9. Market oriented countries are rich and non-market oriented countries are poor.

_____ 10. The theory of the market system is that income is distributed according to how much each invididual produces.

_____ 11. The U.S. economy generally operates on its production-possibilities frontier.

_____ 12. Economic growth can be described as an outward shift of a country's production-possibilities curve.

MULTIPLE-CHOICE QUESTIONS

_____ 1. Allocation of scarce resources is a fundamental problem faced by:
a. specialized economies
b. centrally planned economies
c. free-market economies
d. all economies

_____ 2. In a free-market economy, most decisions on the allocation of scarce resources are made by:
a. individuals and firms participating in a market regulated by a price system
b. the Joint Economic Committee of Congress
c. the central planners
d. the military and the commerce department

_____ 3. Microeconomics can best be described a- the study of:
a. optimum production by government
b. inflation control
c. output and pricing decisions by firms and consumption decisions by individuals
d. full employment

_____ 4. The following is not a factor of production:
a. capital
b. money
c. labor
d. land

_____ 5. The highest valued alternative that must be given up when a choice is made is called the
a. opportunity cost
b. scarcity problem
c. economic problem
d. production possibilities frontier

_____ 6. The term ceteris paribus refers to:
   a. the fallacy of composition
   b. positive economics
   c. holding all other things equal
   d. not changing the production possibilities frontier

_____ 7. In economics "distribution" refers to the question of:
   a. marketing a product
   b. what is to be produced
   c. how production is to take place
   d. who is to receive the goods and services produced

_____ 8. A point on the production-possibility curve represents:
   a. changing technology
   b. full employment of resources
   c. an unlimited supply of resources
   d. production of unlimited quantities of goods

_____ 9. Movement from one point to another on a production-possibility curve shows that an increase in production of one good can be accomplished by:
   a. a change in technology
   b. decreasing production of the other good
   c. increasing production of the other good
   d. increasing the labor force

_____ 10. A shift in the production-possibility curve might result from:
   a. a change in taste and preferences of consumers
   b. unemployment
   c. inflation
   d. a change in production techniques

ANSWERS

Problems/Projects/Thought

1. In a centrally planned economy, the pricing and output decisions are made by a central planning commission, usually a governmental agency. But in a market economy individual businessmen make the output decisions for their own firms. In deciding how what goods to produce and how much to produce they are guided by market prices and profits. Goods which are strongly desired by consumers will increase in price, increasing the profits of firms in that industry. Other firms will then notice the higher profits to be made and enter that industry. Thus, more of the strongly desired goods will be produced, even though no governmental agency directed it. In a market economy, it is prices and profits that direct the production decisions of businesses.

2. The term "scarcity" in economic usage simply means that more of a good is desired by consumers than is freely available from nature. This is because of the underlying assumptions; that human wants are unlimited, and that productive resources are limited. Economic scarcity means only that a price must be paid for the good, but it does not mean that there will necessarily be shortages of a good, which is the more common usage of scarcity.

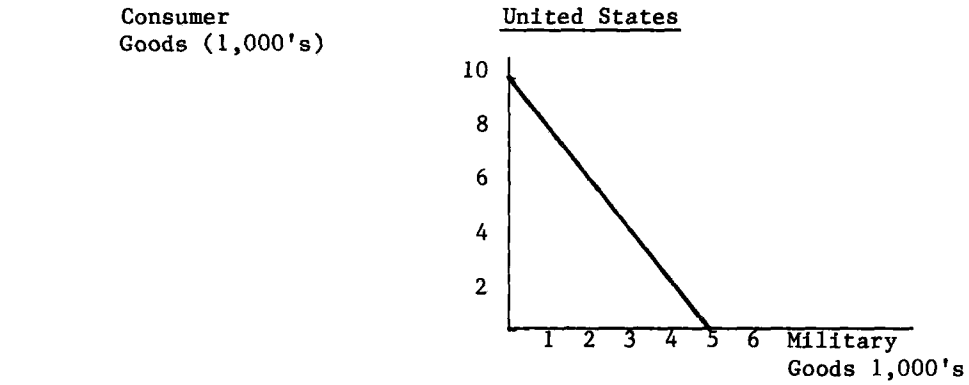
3. Opportunity cost differs from accounting costs in that opportunity cost considers the value of foregone alternatives, in addition to the financial cost of the choice.

Cost of attending college for one year

Books & materials	$400
Tuition & fees	$1,200
Travel expenses	$300
Total Accounting Cost	$1,900
*Lost wages (opportunity cost)	$5,040
Total cost	$6,940

Room and board are not included, since they are not an extra cost associated with college. Presumably, the person would have to eat and sleep somewhere whether or not they attended college. The combination of books, tuition, and travel expenses is taken as an average for a state resident at a state supported university. Tuition and fees are likely to be much higher at a private university. But the single largest component of the cost of attending college is the value of lost wages, the value of lost employment opportunities, or the opportunity cost of attending school. This was calculated on the basis of a minimum wage job, full time, for 36 weeks, a rough approximation of an academic year.

a.



b. If the population of the United States fell, the amount of labor would fall, thus causing the production possibilities curve to shift back, or toward the left.

c. If new oil reserves were discovered, that would increase the productive resources available to society, thus shifting the curve out, or to the right.

d. The opportunity cost of producing 1,000 military goods is 2,000 consumer goods, since that is what must be given up to get more military goods. Similarly, the opportunity cost of producing 1,000 consumer goods is 500 military goods.

True/False

1. T Economic problems occur because scarce resources must be allocated to best satisfy unlimited human wants.

2. F While Smith didn't exactly say that, he did say that it wasn't the love of the butcher, the baker, or the brewer that allowed us to purchase their wares. Each of these traders was in business to make a profit, and it is the price mechanism that allows consumers to purchase what is desired.

3. T Microeconomics is the study of pricing and output policies of a firm and individual consumer behavior. It deals with smaller units than does macroeconomics.

4. F The factors of production are divided into the general categories of land, labor, and capital.

5. T Macroeconomics is the study of economic growth and stability.

6. F Normative economics deals with how we would like the world to be; positive economics describes the world as it is.

7. T When society is on its production possibilities frontier it must sacrifice some of one good in order to get more of another.

8. F The fallacy of composition occurs when one mistakenly assumes that what is true for an individual is also true for society.

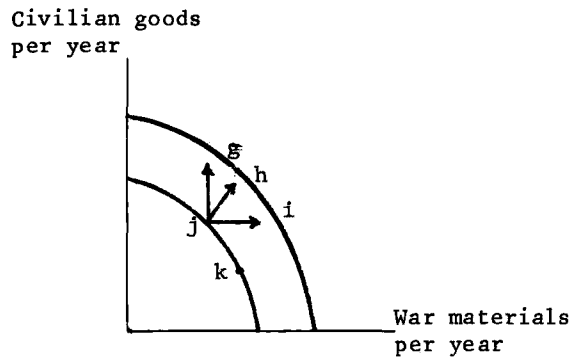
9. F There is no necessary connection between a country's national income and its economic philosophy. If a categorization is useful, we might say that industrialized nations generally tend to have higher per-capita incomes than agricultural nations. There are, of course, exceptions.

10. T In an absolute market system, each individual could eat only as much as he or she could earn. It would be a little tough for babies, the aged, and the handicapped, but after all, it's a jungle out there!

11. F If there is any unemployment of labor, any unutilized or under-utilized industrial capacity, or if any farmland is being "set aside" and not used, the economy is not on the production-possibilities frontier.

12. T Either through an increase in the factors of production or through technological innovation, the economy now has the potential to produce more of both types of goods, or more of one with no reduction in the other.

In terms of the following figure, the economy could move from point j to point g (more civilian goods, no loss of war materials), or it could move from j to i (more war materials, no loss in civilian goods), or it could move to point h (more of both). This implies economic growth and is represented graphically by an outward shift of the production frontier.



Multiple-Choice

1. D Since human wants are unlimited and resources are limited in all countries, all countries face the problem of allocation of resources.

2. A A "free market" has no central planning committee. In a free market, all decisions are made by individual firms and households.

3. C Microeconomics deals with the workings of a market and the firms and consumers operating in that market.

4. B The factors of production are land, labor, and capital. While money is good to have, it can't produce much.

5. A Opportunity cost is defined to be the highest valued alternative that must be sacrificed when a choice is made.

6. B Ceteris paribus, all other things held equal, is used to indicate under what conditions an economic statement is expected to be valid.

7. D Distribution refers to the question, "Who is going to receive the goods and services produced?"

8. B A given production frontier implies fixed resources and unchanging technology. A position inside the curve means either that all resources are not being used or that they are not being used with maximum efficiency. A point on the curve represents all resources being used with maximum efficiency.

9. B In the graph shown in the answer to T/F question 12, movement from j to k means that production of war materials is increasing. But this gain in war materials can only be accomplished by giving up some civilian goods. Production of civilian goods drops. Additional war materials were gained at the "cost" of fewer civilian goods per year.

10. D Economic growth, represented by a shift in the production-possibilities frontier, can occur either with an increase in the stock of factors of production or with an improvement in production techniques.

CHAPTER 2

OVERVIEW OF THE MARKET MECHANISM

LEARNING OBJECTIVES

Chapter 2 deals with the market and the price mechanism as an allocative system. After studying Chapter 2, you should be able to:

1. demonstrate the law of demand
2. recognize a change in demand
3. recognize a change in quantity demanded
4. demonstrate the law of supply
5. recognize a change in supply
6. recognize a change in quantity supplied
7. define market equilibrium
8. explain the process of reaching market equilibrium if the price is too high
9. explain the process of reaching market equilibrium if the price is too low

INTRODUCTION TO KEY CONCEPTS

A market is an interaction of buyers and sellers. Equilibrium occurs in a market when the forces of supply are equal to the forces of demand. An equilibrium price equates the quantity demanded with the quantity supplied. If the market price is above or below the equilibrium price, market forces will tend to drive the price up or down to the equilibrium price.

This equilibrium occurs as a result of the laws of supply and demand. A demand schedule or curve shows that consumers will demand a greater quantity at lower prices or will only be willing to pay lower prices for greater quantities. Prices of complementary and substitute goods also affect the decision of how much to buy of a particular good. A supply schedule or curve shows that producers are willing to produce greater quantities if they can receive a higher price for the goods or services they sell. These decisions are based upon opportunity costs of the next best alternative and expectations about future prices.

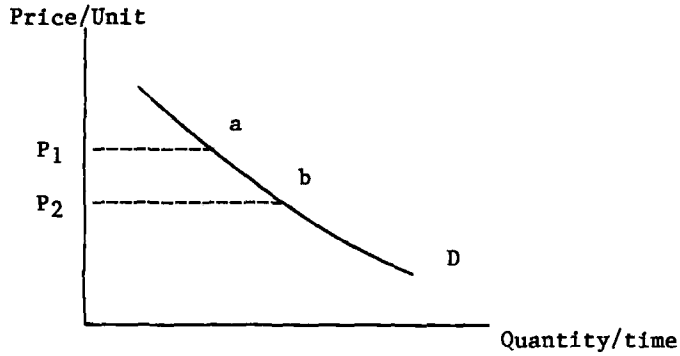
It is essential in an analysis of market forces to distinguish between changes in quantity demanded and changes in demand, changes in quantity supplied and changes in supply. The laws of supply and demand interact to provide a method of resource allocation for scarce factors of production and for goods and services. The price system is only one of many methods of resource allocation.

PROBLEMS/PROJECTS/THOUGHT

One of the major purposes of this chapter is to help you distinguish between changes in quantity demanded/supplied and changes in demand/supply. While this is not difficult distinction, it causes problems for many students. So let's restate the propositions.

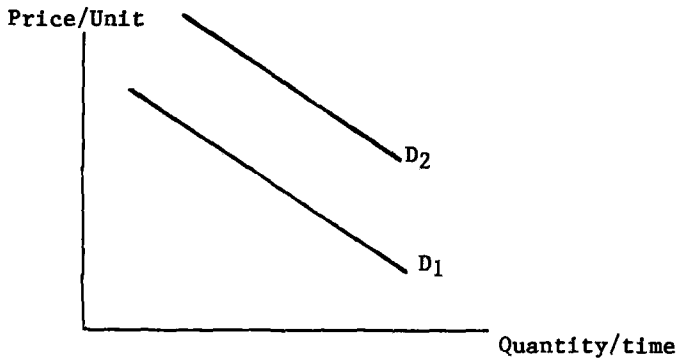
The only thing that can cause a change in quantity demanded of a particular product is a change in the price of that product.

Graphically, a change in quantity demanded is represented by a movement along a demand curve (see below). The movement from a to b represents a change in quantity demanded. Let's take a hypothetical example, using snorkels as the product. Quantity demanded changed because the price of snorkels changed.



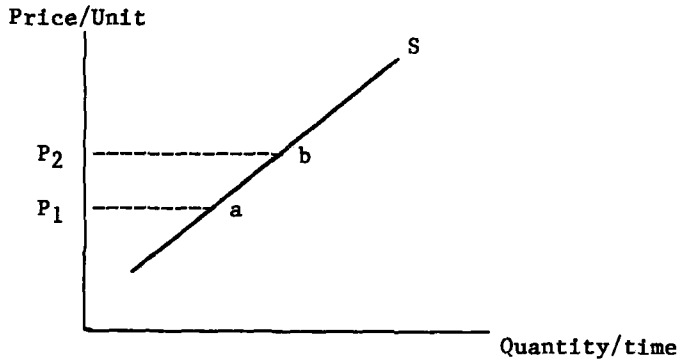
A change in demand can be caused by a change in anything other than the price of the product. Generally, we say that a change in demand is caused by a change in income, tastes and preferences, or prices of related goods.

Graphically, a change in demand is represented by a shift of the demand curve (see below). The shift in the demand curve from D_1 to D_2 represents a change in demand for snorkels. This could have occurred because sea voyages became cheaper, the weather warmed up, skin-diving instruction became cheaper, incomes rose, or people just became more interested in snorkeling.



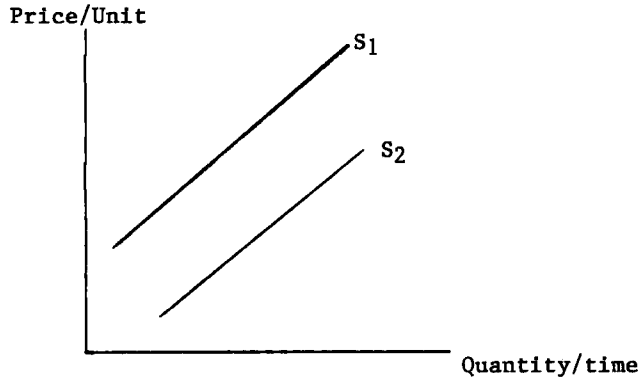
The only thing that can cause a change in quantity supplied of a particular product is a change in the price of the product.

Graphically, a change in quantity supplied is represented by a movement along a supply curve. The movement from a to b represents a change in quantity supplied. Quantity supplied changed because the price of snorkels changed.

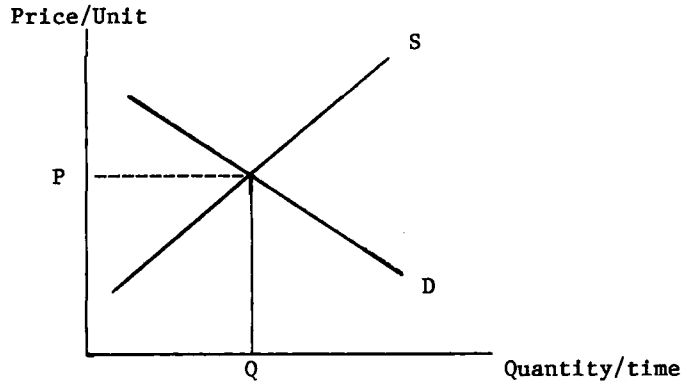


A change in supply can be caused by a change in anything other than the price of the product. Generally, we say that a change in supply is caused by a change in technology or a change in the cost of the inputs.

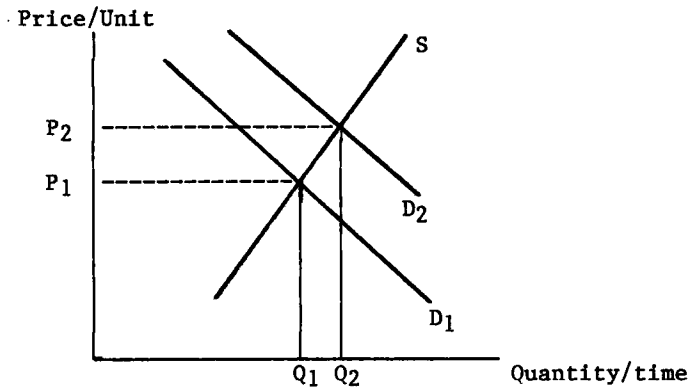
Graphically, a change in supply is represented by a shift of the supply curve. The shift in the supply curve from S_1 to S_2 represents a change in supply (see below). This could have occurred because rubber trees became more productive, technology produced a cheap synthetic substitute for rubber, or a war ended in a rubber-producing country.



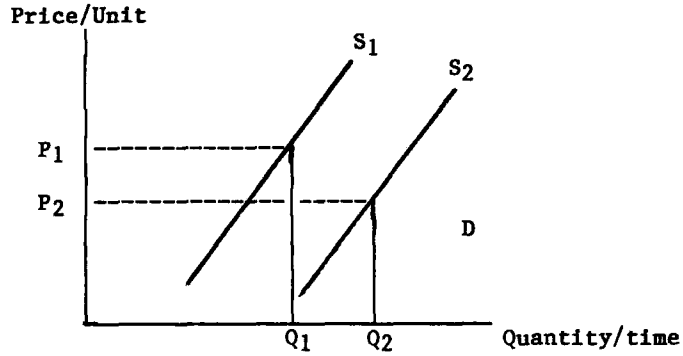
Where supply and demand intersect, an equilibrium price and quantity are determined as shown.



A change in demand causes changes in price and quantity. Note that this causes a change in quantity supplied. A change in demand and a change in quantity supplied are shown below.



A change in supply causes changes in price and quantity. Note that this causes a change in quantity demanded. A change in supply and a change in quantity demanded are shown below.



To summarize:

1. A change in the price of snorkels causes a change in the quantity demanded of snorkels which is a movement along the demand curve

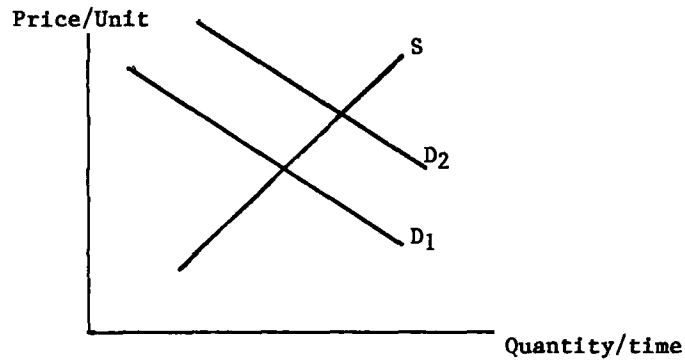
2. A change in the demand for snorkels, caused by changes in income, tastes, or prices of other goods causes a shift in the demand curve

3. A change in the price of snorkels causes a change in the quantity supplied of snorkels which is a movement along the supply curve

4. A change in the supply of snorkels, caused by a change in technology or costs of inputs, causes a shift in the supply curve

Now let's see if you can make the distinctions. Ten hypothetical events related to the beef industry are listed below. Next to each, write the letter from the column on the right that represents the appropriate change. (The product is beef.)

Note that more than one letter will usually be required. It will probably be helpful if you show the changes on graphs. Let's take Number 1 as an example. If the price of a beef substitute, pork, increases, that will cause an increase in the demand for beef. This increase in demand will cause a corresponding increase in price and an increase in the quantity of beef supplied.



___ 1. an increase in the price of pork

___ 2. an increase in the price of corn fed to beef

___ 3. sucessful advertising campaign promoting meat

___ 4. Pope Paul VI declaring that Catholics may no longer eat meat on Fridays

A. increase in quantity of beef demanded

B. decrease in quantity of beef demanded

C. increase in demand

D. decrease in demand

E. increase in quantity supplied

___ 5. conversion of Americans to Hinduism

___ 6. drought, making water available for cattle very expensive

___ 7. a general depression, putting many people out of work

___ 8. a decrease in the price of steak sauce, a complement

___ 9. improvement in technology, cutting down waste from each steer

___10. a successful advertising campaign promoting chicken

F. decrease in quantity supplied

G. increase in supply

H. decrease in supply

I. increase in the price of beef

J. decrease in the price of beef

TRUE/FALSE QUESTIONS

_____ 1. In the economists' sense, demand assumes an ability to purchase.

_____ 2. It is normally expected that an increase in prices will cause an increase in sales.

_____ 3. The law of demand posits an inverse relationship between price and quantity demanded.

_____ 4. The law of demand is based on the premise that each additional unit of the same good or service will yield less satisfaction than the last.

_____ 5. Changes in quantity of bananas demanded result from changes in the price of bananas.

_____ 6. A shift in the demand curve for tennis rackets is caused by a change in the price of tennis rackets.

_____ 7. The demand curve for skateboards has shifted to the right (increased demand) in the last few years as a result of a change in the price of skateboards.

_____ 8. Assume beer and pizza are complementary goods. If the price of pizza falls, the quantity of beer demanded will fall.

_____ 9. Assume the price of baseball tickets doubles. The demand curve for hot dogs is likely to shift to the right.

_____ 10. Assume the rent for apartments doubles. This will cause increased demand for houses.

_____ 11. Price and quantity supplied vary directly.

_____ 12. An increase in the price of a good will cause a change in supply.

_____ 13. The ban of DDT because it was considered an environmental pollutant was an example of a change in technology that shifted the supply curve of agricultural output to the right.

MULTIPLE-CHOICE QUESTIONS

_____ 1. The relationship between quantity demanded and price is:
a. obverse
b. indirect
c. inverse
d. reverse

_____ 2. If the price of electricity rises sharply, the quantity used will:
a. rise
b. fall
c. remain unchanged
d. be indeterminate

_____ 3. The following would cause a shift in the demand curve for a commodity:
a. a decrease in cost
b. a change in technology
c. an increase in price
d. an increase in income

_____ 4. If the price of cars is suddenly expected to rise significantly next year, one might currently expect:
a. a shift to the right for current demand for cars
b. a shift to the left for current supply cars
c. an upward movement along the demand curve for cars
d. a downward movement along the demand curve for cars

_____ 5. If automobiles and motorcycles are substitute goods and the cost of producing automobiles increases due to pollution-control devices, the following can be expected:
a. a leftward shift in auto supply and a rightward shift in cycle demand
b. a rightward shift in auto supply and a leftward shift in cycle demand
c. a leftward shift in auto demand and a leftward shift in cycle supply
d. a rightward shift in auto demand and a leftward shift in cycle demand

_____ 6. The cost of producing corn as opposed to producing soybeans represents:
a. marginal cost
b. average cost
c. decision cost
d. opportunity cost

_____ 7. The quantity of a commodity supplied varies with the price:
a. directly
b. indirectly
c. inversely
d. reversely

_____ 8. If the cost of peanuts increases substantially, the supply of peanut butter will:
a. increase
b. decrease
c. remain unchanged
d. decrease demand

_____ 9. If government sets the price of corn at $3 per bushel and the equilibrium price is $2 per bushel:
a. there will be a shortage of corn
b. quantity of corn demanded will be greater than the quantity supplied
c. opportunity cost will fall
d. there will be a surplus of corn

_____ 10. If, at $1 per pound, 600 chickens are demanded and 1000 chickens are supplied:
a. price is above equilibrium
b. price is at equilibrium
c. price is below equilibrium
d. supply exceeds demand

_____ 11. If the price of coffee is 90 cents per pound and the equilibrium price is $1 per pound:
a. demand will shift right
b. consumers will bid up the price
c. supply will shift left
d. demand will shift left

_____ 12. When the demand for a good increases, the price of the good will:
a. increase
b. decrease
c. remain the same
d. be indeterminate

_____ 13. If supply and demand shift simultaneously, the new price will:
a. rise
b. fall
c. remain unchanged
d. be indeterminate

_____ 14. If producer technology increases and allows the cost of producing calculators to decrease, the result will be:
a. an upward movement along the demand curve for calculators
b. a decrease in calculator supply
c. an upward movement along the supply curve for calculators
d. a movement downward on the calculator demand curve