

1

Introduction

PURPOSE

The text you are using is meant for a nontechnical course in economic issues and policy. In this chapter, I introduce students to the basic economic concepts they will need to know in order to analyze the issues in this text and other issues that they may encounter later on in life. It also introduced them to some of the topics they will consider in later chapters.

LEARNING OBJECTIVES

The learning objectives for this chapter are:

1. to acquaint the student with the ideas of scarcity, opportunity cost, and the need for choice.
 2. to enable the student to understand basic economic terminology.
 3. to help the student learn to use the production possibilities model to analyze opportunity costs, unemployment, and economic growth.
 4. to enable the student to understand the supply and demand model and how markets determine prices and allocate resources.
 5. to introduce the student to the concepts of efficiency and equity, market successes and failures, micro and macroeconomics, and some of the policy issues that economists study.
 6. to help students begin to understand the economic left (liberal) and economic right (conservative) positions so that they have a framework within which to formulate their own opinions throughout the course.
-

LECTURE SUGGESTIONS

- I hope you've read the *Preface to the Instructor* at the beginning of the text. This will help you as you plan and teach your course. I apologize for some of the repetition below, which will only occur in Chapter 1 of this manual.
- Please encourage your students to read the *Preface to the Student* as well. I think it will help them and set the tone for the book.
- Students like to skip over the “boxes” and other featured material in the text. This is where you come in to encourage (insist that?) students utilize the various features of the textbook that will make it easier for them to succeed in the course. These include the *Road Map* and *Economic Toolbox* at the beginning of each chapter. In Chapter 1, the *Road Map* naturally leads to all other chapters in the text. The *Economic Toolbox* provides students with a “heads up” for concepts they should watch for in the text. (It can help you as well.) Students should certainly pay close attention to the tables and figures throughout the chapters; it is so important that they carefully read the captions and titles, as well as the axes on graphs, and understand the difference between mean and median, monthly and annually, GDP and GNP, GDP and GDP per capita, and so on. In Chapter 1, they need to keep track of the fact that both axes of the production possibilities graph represent physical quantities, whereas the axes on demand and supply graphs represent each of price and quantity. Finally, the *Summary* at the end of each chapter and the *Index* and *Glossary* at the end of the text are most useful.

- The *Viewpoint Section* in each chapter explains the views and policy preferences of those on the economic left (liberal) and those on the economic right (conservative). These sections enable the students to develop a framework for their own viewpoints and policy preferences. The *Viewpoint Section* in Chapter 1 is most important, as it establishes the framework of the economic left and right in a manner that students will use throughout the rest of the text. (They will be lost without it!)
- The section, *You the Student*, at the end of each chapter is designed to get the student to think about how they might become involved in the issues presented in each chapter. In Chapter 1, they are asked to consider the relationship between their education and improving the world around them. The *Discussion and Action Questions* are generally designed to get students to think and to consider how they can make this a better world as well. These questions are generally “hands on”, with students using the internet, creating graphs, becoming involved with an issue, and other activities. (You may find that the websites mentioned in the *Discussion and Action Questions* and in the *Notes* at the end of each chapter are useful to you in preparing lectures or conducting your research.) Examples of *Discussion and Action Questions* in Chapter 1 include those that ask students to ponder whether our frequently efficient market-based economy is necessary equitable, and whether income or some other factor should determine how much and what types of products an individual can buy.
- In addition to including chapters focused on international and diversity material, I’ve also tried to include quite a bit of this material throughout the chapters. Global and diversity topics are highlighted by respective icons in the margins of the text.
- Take time to show your students how to graph data, rather than expecting them to understand the graphs as they enter the course. I am often surprised at the lack of mathematical background many of our students bring to this course.
- I always begin our discussion of the production possibilities curve with a discussion of scarce resources. I find that I need to repeat several times that the axes of the graph represent physical quantities, not monetary variables such as price or cost.
- In order to simplify, constant opportunity costs are assumed in the production possibilities model. If you want to use increasing opportunity costs, this material is available in Appendix 1–1 to this chapter.
- I find that the most important uses of the production possibilities model are the basic concepts of opportunity costs, unemployment (broadly speaking), and economic growth. It helps to point out that all of the rhetoric that comes from politicians about how they would create economic growth is simply their own invention if it doesn’t correspond to the sources of economic growth discussed in the text.
- Emphasize that current choices may influence production possibilities tomorrow. Discuss this not only in terms of society’s investment in physical capital, but also in terms of its investment in infrastructure, natural resources (including technology for clean energy), and human capital. The latter investment has the advantage of benefiting people in both the short run and the long run and is especially important for poverty-stricken people in developing countries.
- Point out that the production possibilities curve can shift inward if environmental degradation, depreciation of the capital stock, oil spills, natural disasters, and so on occur.
- As you discuss supply and demand, emphasize the positive or negative relationship shown by the slope of each curve in the graph. Many students find these concepts confusing. Emphasize that with price on the vertical axis, a price change will cause a *movement along* the demand or supply curve to a new quantity demanded or supplied.
- Emphasize that students are to shift the curve of the one group (consumers or producers) that is most *directly* and *immediately* affected by some change that is occurring. It is difficult for students to absorb the fact that when an event causes one of the curves to shift, the other group (consumers or producers) responds to the changing price by moving *along* their respective curve. They should not shift the second curve!
- Because this previous concept is so difficult for students to understand, I avoid shifting two curves in any one graph, and I tell students *not* to shift both curves on an exam. This helps them avoid errors, because they will *want* to shift both curves even when it is appropriate to only shift one. It is easier for students to grasp this if

they are told to never shift two curves in one graph, though they should be told that in the real world, this may occur. (If I want to show the effect of an event that causes both curves to shift, I draw two separate graphs, shifting only one curve per graph, and I tell students that the outcome of the event will in part depend on which shift is dominant.)

- Emphasize to students that when they consider a change in demand or supply, they should always *first* label the initial price and quantity along the appropriate axes, *then* shift the appropriate curve, and *then* label the new price and quantity along the appropriate axes. (Don't allow them to place labels *within* the graph – they will want to do this!) More significantly, I am always amazed at the circular reasoning of some beginning students when asked to predict the direction of a price change that follows an event. They want to first use their intuition to forecast the price change, and then shift curves in random directions to get this result. Their answer is usually incorrect. Instead, they must follow the sequence described above.
- Students have a very difficult time remembering that an increase in supply is a *forward shift* of the supply curve, and *not* an upward shift! It helps to draw flat arrows pointing to the right when shifting the supply curve forward. It is useful to always discuss *both* demand and supply in terms of forward and backward shifts, rather than up and down.
- Carefully discuss the relationship between a change in costs of production (including a change in opportunity costs) to a shift in the supply curve. Unlike a micro principles course, we cannot take days to discuss this relationship. I usually tell my students to simply think in terms of incentives. If costs of production decrease, the profit margin increases and producers have an incentive to supply more of the product.
- Encourage students to think of an improvement in technology as making it cheaper and easier to produce. This will help them remember to shift the supply curve forward (even if the new technology is expensive in the immediate time period).
- Encourage students to think of an excise tax as an increased cost of production (because it is the supplier who hands the tax dollars over to the government). As with any increased cost of production, the supply curve will shift backward.
- Try to generate enthusiasm for your course by telling students that there are only two basic graphs used in the course, the production possibilities curve and demand and supply. Once students have mastered these, they really know a great deal about economics, and certainly far more than many of the politicians, newscasters, and generally opinionated people they meet.
- As our student populations have become more diverse, I have become more aware of the cultural bias of the examples I use. Many international or minority students do not automatically think of complements when presented with cranberry sauce and turkey, for example. So be sure to describe the relationships that are not obvious to everybody.
- Encourage your students to review their class notes on a daily basis and to practice re-drawing all graphs! Encourage them to be able to define all important terms in the chapter, utilizing the helpful definitions in the margins of the chapters.

ANSWERS TO TEXT DISCUSSION AND ANSWER QUESTIONS

1. Use the production possibilities curve to show that increased resources allocated to national defense entail decreased amounts of other goods and services.
2. Unemployment implies that we produce less output than we could.
3. By using our resources and technology to their fullest, we increase our production and we generally assume that this raises our standard of living. Greater output also implies that we can be more generous in our foreign aid to poorer nations. Types of output are also important. For example, if we produce military goods instead of public health goods, the average standard of living may be adversely affected. If we produce capital goods instead of consumer goods, the capital goods go into our resource supply and cause greater economic growth in the future (and greater production of both capital *and* consumer goods). Less developed countries face

agonizing choices when deciding between current and future consumption, such as investment in capital goods that may benefit them in the future versus production of food products that consumers may desperately need now. Investment in human capital (health and education) creates economic growth *and* improves standards of living in the immediate time period and provides a partial solution to this dilemma. Distribution of income (generated from the production of output) is also important, as extremely high incomes in the hands of a few and very low incomes in the hands of the many suggests overall poor standards of living. Side effects of higher production levels should also be considered, as greater pollution, depletion of finite resources, and longer work weeks may certainly lower our standards of living, if not now, certainly in the future. All of these considerations may have as much of an impact on standards of living as the level of GDP by itself.

4. Talk about a value-laden question! We might discuss both need and contribution to production here. And, we need not be absolute. We may desire a system of distribution that ensures basic needs satisfaction for everyone, and beyond this, distribution depends on income. In times of short supply, some nations have rationed goods, and some have relied on a first-come first-serve basis. (These latter cases usually occur when there are price ceilings.)
5. No. Supply and demand in the market create equilibrium. If the farmers' or flea market is large enough, supply and demand should create equilibrium there as well.
6. No. Equity usually involves topics like income distribution, poverty, discrimination, consumer or worker safety, and so on. These may certainly be problems in a market economy.
7. \$16; 600 apples. Supply has decreased: \$18; 400 apples.
8. Student activity.

ADDITIONAL DISCUSSION AND ACTION QUESTIONS

Some of the following additional questions may be helpful in preparing lectures. [Note: I normally do not ask students in a first-year class to draw graphs. Rather, I draw the graphs and ask students to add curves, shift curves, label points, answer questions, and so on. You may wish to use questions that require the drawing of graphs, however.]

1. The following is a production possibilities schedule for prisons and public education.

<u>Alternative</u>	<u>Prisons</u>	<u>Public Education</u>
A	160	0
B	120	20
C	80	40
D	40	60
E	0	80

Graph the production possibilities curve. Then discuss the following:

- a. What is the opportunity cost of the first 20 units of public education? Of the last 20 units (from 60 to 80) of education?
- b. Add point F (40 units of education, 60 units of prisons). What does it represent?
- c. Why cannot the economy produce 60 units of education and 80 units of prisons?
- d. If the economy grows and the curve shifts out in the future, could the economy produce 60 units of public education and 80 units of prisons? What might cause the economy to grow?

2. The following are the demand and supply schedules for peaches during one week. Graph them and discuss the equilibrium price and quantity.

<u>Price</u>	<u>Quantity Supplied</u>	<u>Quantity Demanded</u>
\$6	2,000	1,200
5	1,800	1,400
4	1,600	1,600
3	1,400	1,800
2	1,200	2,000

- What would be the result if price were temporarily \$5? \$2?
 - Now show an increase in demand by 200 quantity units at each price. What might cause such a change? Show on the schedule and on the graph. What is the new equilibrium?
- Discuss a good that has a spillover benefit, such as education or immunizations.
 - What is a public good? Do people differ as to what they consider public goods? Do these goods actually have to be produced by the government?
 - Discuss the factors that cause demand and supply curves to shift.
 - What do economists mean when they say, “There is no free lunch”?

SUGGESTED TEST QUESTIONS

Multiple-Choice Questions

- The law of demand says that:
 - price and quantity demanded are positively related.
 - price and quantity demanded are negatively related.**
 - price and quantity supplied are positively related.
 - price and quantity supplied are negatively related.
- Fill in the blanks to complete the following statement. Price and quantity demanded are _____ related, and price and quantity supplied are _____ related.
 - negatively, positively**
 - positively, negatively
 - negatively, not
 - not, negatively
- Opportunity cost refers to:
 - the dollars spent on a product.
 - the best alternative forgone in order to produce or consume something.**
 - the resources used to make something.
 - the money spent by a business to produce something.
- Economics deals primarily with:
 - inefficient businesses.
 - insufficient money.
 - scarcity.**
 - inequity.

5. Which of the following is *not* considered to be a resource in economics?
 - a. land
 - b. labor
 - c. machinery
 - d. money**

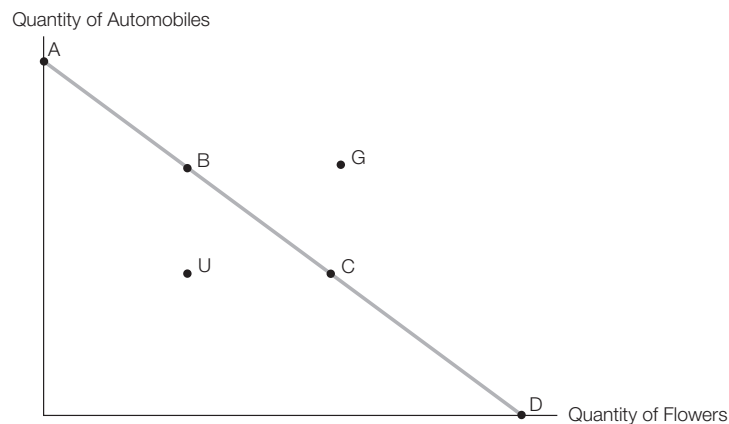
6. Opportunity costs are displayed in the production possibilities graph as:
 - a. a movement along the curve.**
 - b. a point below the curve.
 - c. a point out beyond the curve.
 - d. They are not displayed by production possibilities.

7. Which of the following is *not* considered a service?
 - a. healthcare
 - b. education
 - c. an automobile**
 - d. city mass transit

8. Which of the following is *not* true? Production possibilities assumes that:
 - a. all available resources are fully used.
 - b. all available resources are efficiently used.
 - c. while technology may change, the quantity of resources does not change over the relevant time period.**
 - d. the quality of resources does not change over the relevant time period.

9. Unemployment causes harm:
 - a. to the unemployed person and his/her family.
 - b. to the economy as a whole.
 - c. in terms of the production possibilities curve.
 - d. All of the above**

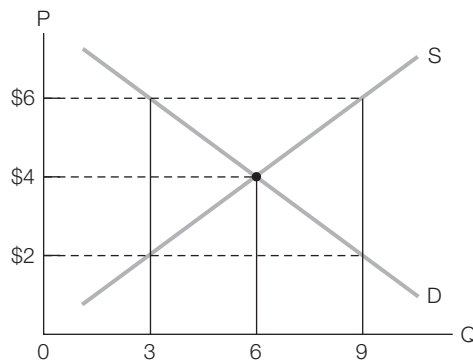
The next three questions refer to the following production possibilities curve.



10. Which point indicates that all resources and technology are put into automobile production and no flower production?
 - a. A**
 - b. D
 - c. U
 - d. G

11. Which point indicates unemployment?
- A
 - D
 - U**
 - G
12. A movement from Point B to Point C represents:
- economic growth.
 - scarcity.
 - opportunity costs.**
 - inefficiency.

The next three questions refer to the following demand and supply graph.



13. Equilibrium price and quantity are:
- \$6 and 3.
 - \$4 and 6.**
 - \$2 and 3.
 - None of the above
14. At \$2, there would be a _____ in this market.
- surplus of 6
 - shortage of 6**
 - surplus of 3
 - shortage of 9
15. At what price would there be a surplus of 6?
- \$6**
 - \$4
 - \$2
 - We cannot say from this data.
16. When the demand curve shifts to the right, we say that:
- price has decreased.
 - equilibrium quantity has decreased.
 - demand has decreased.
 - demand has increased.**
17. When demand increases in a graph of demand and supply:
- equilibrium price will increase, but equilibrium quantity will decrease.
 - equilibrium price will decrease, but equilibrium quantity will increase.
 - both equilibrium price and quantity will decrease.
 - both equilibrium price and quantity will increase.**

18. When supply increases in a graph of demand and supply:
- equilibrium price will increase, but equilibrium quantity will decrease.
 - equilibrium price will decrease, but equilibrium quantity will increase.**
 - both equilibrium price and quantity will decrease.
 - both equilibrium price and quantity will increase.
19. Police protection and national defense are examples of:
- capital goods.
 - public goods and services.**
 - private goods.
 - resources.
20. When we say “all other things equal” with regard to demand and supply, we mean that:
- only one curve at a time can shift.
 - factors other than price that could affect quantity demanded or supplied do not change.**
 - the market is at equilibrium.
 - there is neither a surplus nor a shortage in the market.

(Appendix 1-1) The following four questions refer to the production possibilities schedule below.

<u>Alternative</u>	<u>Housing</u>	<u>Food</u>
A	140	0
B	120	10
C	90	20
D	50	30
E	0	40

21. What is the opportunity cost of the first 10 units of food?
- \$200,000
 - 20 units of housing forgone**
 - 50 units of medical care forgone
 - We cannot say because we do not know the price of either housing or food.
22. What is the opportunity cost of the last 10 units of food?
- 20 units of housing forgone
 - 50 units of housing forgone**
 - 50 units of food
 - We cannot say because we do not know the price of either housing or food.
23. The essential point of this production possibilities schedule is that:
- with limited resources, we cannot have unlimited amounts of housing and food.**
 - we should provide our citizens with free housing and free food.
 - we could provide our society free housing, but not free food.
 - we do not really have to make a choice between housing and food, because we have plenty of resources to provide as much as we wish of both.
24. This production possibility schedule displays:
- increasing opportunity costs.**
 - constant opportunity costs.
 - no opportunity costs.
 - perfect opportunity costs.

25. Which of the following does *not* represent a market failure?
- spillovers
 - market power
 - the need for public goods and services
 - technology change**
26. The ability to influence the market price of a product is:
- competitive pricing.
 - microeconomic pricing.
 - market power.**
 - economic power.
27. Which of the following is a microeconomic topic?
- total income
 - total output
 - distribution of income**
 - gross domestic product
28. The term *public*, as used in this course, refers to:
- consumers.
 - businesses.
 - workers.
 - government.**
29. Every point on the production possibilities curve displays:
- full employment of labor.
 - full employment of resources other than labor.
 - the current time period.
 - All of the above**
30. Which of the following is generally *not* a private good?
- a house
 - a school**
 - a factory
 - a restaurant
31. Which of the following can cause an outward shift in the production possibilities curve?
- an increase in the quantity of resources
 - an improvement in the quality of resources
 - an improvement in technology
 - All of the above**

True-and-False Questions

- Price and quantity demanded are positively related. (F)
- Price and quantity supplied are positively related. (T)
- Equilibrium price will go up if supply increases. (F)
- A shift of the supply curve to the right is an increase in supply. (T)
- Society can reach a point beyond its current production possibilities curve if economic growth occurs. (T)
- Any point on the production possibilities curve represents full employment. (T)
- Production possibilities curves never shift outward. (F)

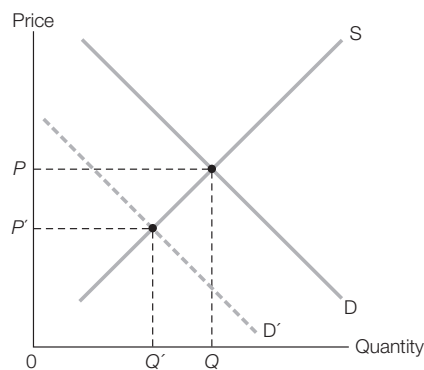
8. Economic growth is associated with an outward shift of the production possibilities curve. (T)
9. Public goods are generally provided by the government. (T)
10. Spillover costs or benefits are examples of market failures. (T)
11. Scarcity means that we have limited resources relative to our unlimited wants. (T)
12. Most economists believe that the government should not become involved in the case of a market failure. (F)
13. An excise tax on cigarettes will cause an increase in the price of cigarettes. (T)
14. Opportunity cost is defined as the best alternative foregone. (T)
15. Unless externalities or other market failures are present, the competitive market place is generally considered to be equitable. (F)
16. Pure capitalism is characterized by private ownership and government economic decision making. (F)
17. Liberals (economic left) generally value equity. (T)

(Appendix 1-1)

18. “Increasing opportunity costs” means that as more of one good is produced, we must give up increasingly smaller amounts of the other good. (F)
19. Increasing opportunity costs result from the fact that resources are equally generally suited equally well to producing both goods under consideration. (F)

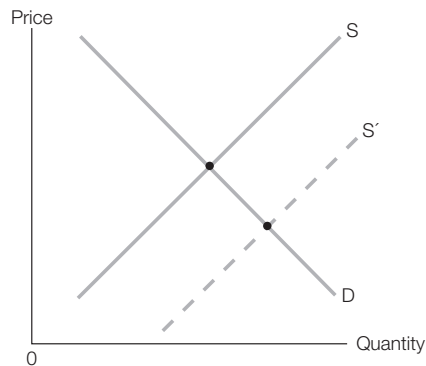
Short-Answer Questions

1. Consider the market for beef below. Assuming that consumers either eat beef or other meats, shift the curve that demonstrates what would occur in the beef market if the price of chicken goes down. What will be the effect on the equilibrium price of meat? (**decrease**) What will be the effect on the quantity of beef that is bought and sold? (**decrease**) Note: remind your students that they should address this question in the following sequence.
 - i. draw in the initial price and quantity P and Q,
 - ii. decide which group (*consumers or producers*) is affected most directly and immediately (**consumers**),
 - iii. shift the single curve forward or backward appropriately (**demand for beef shifts backwards**), and
 - iv. label the new price and quantity (**P' and Q'**). Note: students should shift only one curve!



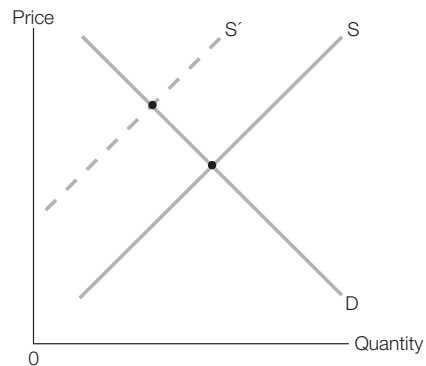
Beef Market

2. Shift the curve to show what will occur in the market for corn below if farmers in the Midwest have unusually good weather this year. What will be the effect on market price? (**decrease**) What will be the effect on the amount of corn that is bought and sold? (**increase**) Note: proceed with the same steps as in the previous graph in this and the subsequent demand and supply graphs.



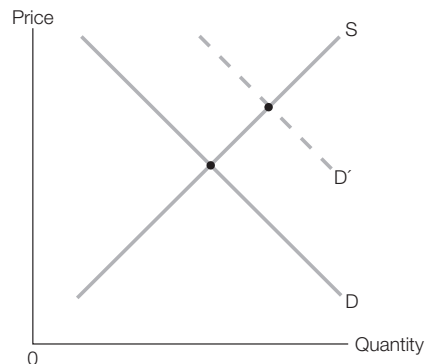
Corn Market

3. Shift the curve to show what will occur in the market for steel below if rising energy prices increase the cost of producing steel. What will be the effect on the market price of steel? (**increase**) What will be the effect on the equilibrium quantity bought and sold? (**decrease**) Note: proceed with the same steps as in the previous graph.



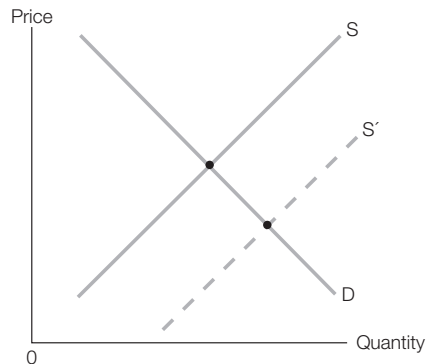
Steel Market

4. The market for Geritol (a supplement used by elderly people) is shown below. Shift the curve to show what will occur as the size of the elderly population increases. What will be the effect on the market price of Geritol? (**increase**) What will be the effect on the equilibrium quantity bought and sold? (**increase**)



Geritol Market

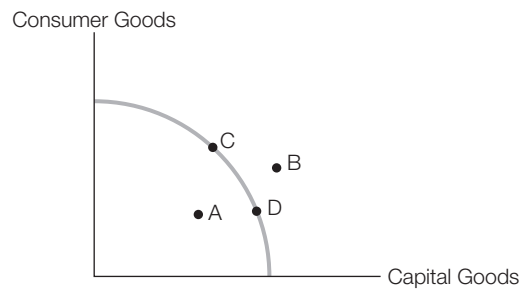
5. Shift the curve to show what will occur in the milk industry if technological progress makes it cheaper and easier to produce milk. What will be the effect on the market price of milk? (**decrease**) What will be the effect on the equilibrium quantity bought and sold? (**increase**)



Milk Market

(Appendix 1-1)

6. Consider the production possibilities curve below. Which point on the graph shows:



- unemployment of resources: (**A**)
 - a level of output unachievable in the current time period, but possible with economic growth: (**B**)
 - a level of output showing increased capital goods and fewer consumer goods (in comparison with Point C): (**D**)
7. Using the same graph as #6, shift the curve to show what will occur over time as a result of economic growth made possible by the expansion of capital goods production in the initial time period. (**The entire curve will shift outward.**)

Critical Thinking Question

Students have now just brushed the surface of the concepts of markets, efficiency, equity, market failures, and government intervention. Nevertheless, they probably have some ideas of their own about government role in the economy. It would be interesting to ask them now how they feel about government intervention in the economy, and then see if any of them change their answers to this question by the end of the semester: Consider the topics of poverty, discrimination, public safety, public goods and services, spillovers, market power, and economic stability. Ask them how and to what extent they believe the government should be involved in facing these issues.