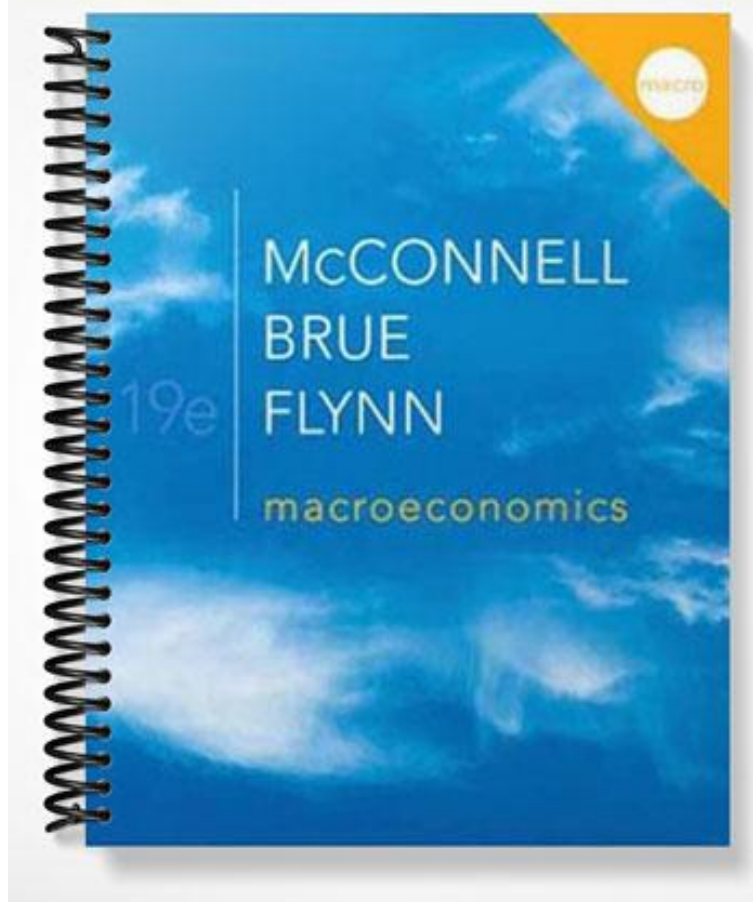


# SOLUTIONS MANUAL



## CHAPTER TWO THE MARKET SYSTEM AND THE CIRCULAR FLOW

### **CHAPTER OVERVIEW**

*This chapter begins with a brief comparison of the command and market systems, transitioning quickly to a discussion of the institutional framework of the American market system. Brief explanations are given for these characteristics of the market system: private property, freedom of enterprise and choice, the role of self-interest, competition, markets and prices, the reliance on technology and capital goods, specialization, use of money, and the active, but limited role of government. The authors then address the Five Fundamental Questions faced by every economy and explain how a market economy answers each one. A discussion of Adam Smith's "invisible hand" leads into an explanation of why command systems have failed. The final part of the chapter introduces the circular flow model as an overview of how resources and goods move through a market system.*

### **WHAT'S NEW**

There are no significant changes in this chapter between the nineteenth and eighteenth editions.

A short discussion about property rights and mutually agreeable transactions has been added and it is included as a bullet point in the Quick Review 2.1.

The "Consider This" box called, "McHits and McMisses" includes three more items introduced by McDonalds.

The discussion of competition on a firm's profit, prices and costs has been expanded.

"Resource Market" and "Products Market" sections have been deleted and in their place is information about households, businesses and a shorter discussion of the products and resource markets.

The following have been added at the end of the chapter to "Terms and Concepts": households, businesses, sole proprietor, partnership, and corporation.

### **INSTRUCTIONAL OBJECTIVES**

After completing this chapter, students should be able to:

1. Highlight the main features of a market economy and a command economy.
2. List and explain the important characteristics of the American market system.
3. State the Five Fundamental Questions faced by any economic system.
4. Describe how the market system answers each of these five fundamental questions.
5. Explain how the consumer influences the "What goods and services will be produced?" question.
6. Explain how a market system achieves economic efficiency.
7. Explain how markets answer the "Who will get the output?" question.
8. Describe how prices drive the movement of resources in a market system.
9. Describe how the market system promotes technological improvements and capital accumulation.

10. Explain the role of self-interest and “invisible hand” in promoting economic efficiency.
11. Explain why the command systems of the Soviet Union, Eastern Europe, and China failed.
12. Identify the decision makers and the markets in a market system using the circular flow diagram.
13. Identify the two roles each that households and businesses play using the circular flow diagram.
14. Differentiate between product and resource markets.
15. Define and identify terms and concepts listed at the end of the chapter.

### **COMMENTS AND TEACHING SUGGESTIONS**

1. A surprising number of students do not really understand the characteristics of the American market system. Many students have no idea how prices are set and even after the chapter on supply and demand may still believe that most prices are determined by an external government agency or by producers arbitrarily.
2. In discussing the importance of private property, you may want to use the following Concept Illustration.

#### **Concept Illustration – The “Berry Bikes” and Private Property**

The following excerpt illustrates the importance of personal property rights to the “care and maintenance” of property. Where no such rights exist, property tends to get overused and abused.

##### The “Berry Bikes”: A Lesson in Private Property<sup>1</sup>

Berry College is a private college located on a large campus adjacent to Rome, Georgia. In March 1998, the Berry College Student Government Association (SGA) used student activity funds to purchase 20 bicycles for student use on campus.

The bright red bicycles, each with an identifying plate reading, “Berry Bike,” were available to all students on a “first-come, first-served basis,” making them a common property resource. The rationale for spending student fees was that the distance between some buildings on campus made getting to class on time difficult. Several factors would seem to favor the plan. The campus is relatively self-contained; it is unlikely that townspeople would enter college property to use the bikes or that students would ride them off campus where they would be abandoned, lost, or stolen.

Moreover, the student body is relatively small. Anyone who abused a bicycle could be readily identified, and the students harmed by having bicycles mistreated would not be strangers. These factors would presumably deter would-be vandals.

Unfortunately, the results of the Berry bike project were dismal. It took little time for the misuse of the bicycles to become evident. Writing in the April 2, 1998, *Campus Carrier*, student Liz Hill reported that “Chains have been broken, tires punctured, handlebars bent, and seats torn” after “only a couple of weeks.” Recognizing the underlying cause of mistreatment, Hill implored students to “treat the bikes as if they were your own property.” Evidently, her column spurred little change.

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<sup>1</sup> This anecdote is abridged from Daniel L. Alban and E. Frank Stephenson, “The ‘Berry Bikes:’ A Lesson in Private Property,” *The Freeman*, October 1999, p 8-9. Reprinted with permission.

On April 21, SGA President M. Lynsey Morris e-mailed all students that “It has come to our attention here in the SGA office that many students are failing to take care of the Berry Bikes.... These bicycles are top quality and should not be bending and breaking the way they are. The [SGA] officers and other students have seen many people riding the bikes at absurd speeds, doing tricks, and just abusing the bicycles in general.” She too requested that students “treat [the bikes] as you would your personal property.” Morris’s appeal [also] apparently met with little success; a survey at the end of the semester revealed that four of the 20 bikes were lost or stolen and 11 were in a state of disrepair.

Undeterred, the SGA had the bicycles repaired over the summer recess and resumed the program in the fall. It soon became apparent that the abuse would continue. The September 10 *Campus Carrier* editorialized about “mangled corpses of twisted red metal that lie about campus” and concluded that “Perhaps SGA put too much trust in human nature and Berry students’ respect for property.” Was that the problem? Or was it that the SGA did not understand the role of incentives? Only a month into the new semester, the SGA suspended the program with the intention of leasing the remaining bicycles to students on a semester-by-semester basis, thereby alleviating the problems associated with common-property resources.

3. If you haven’t already talked about Adam Smith and his role in economics, this may be a good time to introduce the “father of economics.” His emphasis on the role of self-interest in motivating economic activity is especially relevant here. You might place copies of the “Wealth of Nations” on reserve at the library to encourage students to sample the original work. You could use short excerpts as the basis for discussion or essays. “Adam Smith and the Wealth of Nations,” a 28-minute video/film, is an excellent supplement. Check with your Federal Reserve District Bank’s public information office or your nearest Center for Economic Education for availability.
4. Markets coordinate economic activity and changes in prices (products and resources) signal that changes have occurred within particular markets. A simple example of product X and product Y can be used. Assume an increase in the demand for X. This change will lead to an increase in the price of X, an increase in the profitability of X, an increase in the quantity supplied of X, an increase in the demand for the resources used to produce X, and an increase in the prices of the those resources. Because of a limit in consumer income, the demand for Y is assumed to decrease followed by all of the changes that will occur in response to the decrease in the demand of Y. After all of these changes have occurred, explain how the transferable resources will move from Y to X. This illustrates the concepts of the “invisible hand.”
5. This is a good time to reintroduce the concept of goods for the future from chapter 1. In discussing the importance of producing goods for the future for the market system, remind the students of the impact upon the production of consumption goods in the present.
6. In discussing the use of money, the following Concept Illustration may be useful.

Imagine a worker producing alternators for automobiles. At the end of the week, instead of receiving a piece of paper signed by the company, or a few pieces of paper engraved in green and black, the worker’s pay consists of ten alternators. With no desire to hoard alternators, the worker ventures into the business district to spend this income on groceries, clothing, and a movie. Obviously, the worker is faced with some inconvenient and time-consuming trading, and may not be able to negotiate any exchanges at all. Finding an owner of a clothing store who needs an alternator can be a formidable task. And if the clothing does not trade evenly for the alternators, how do the parties “make change”?

Such an illustration may lead students to conclude that money is one of the great social inventions of civilization.

7. The five fundamental questions must be answered by all types of economic systems. Although the emphasis of this chapter is on the American market system, current economic changes in Russia and China and areas of the developing world can be discussed to illustrate how different types of economics answer these questions differently. Students tend to be fascinated with the contrasts between the former Soviet and American systems; the contrasts seem to make students more aware of aspects of capitalism that may have been taken for granted. In any case the instructor may want to supplement the chapter by assigning students to find current news items on the economies of the transitional economic systems of the former Eastern bloc countries. This helps to point out that the economizing problem and five fundamental questions are common to all societies, not just to capitalist systems. The new “Consider This” box on “The Two Koreas” is another example illustrating the contrast between command and market economies.
8. The “Consider This” box on McDonald’s product innovations that have thrived or failed is an effective way to reinforce consumer sovereignty and its importance to the question of “What will be produced?”
9. When discussing the first two of the fundamental questions, ask who in the market economy are most responsible for answering each of the questions. Explain that the “Who will get the output?” question is an income distribution question and is determined by the distribution and productivity of the resources and the demand for the resources. Discuss how differing consumer dollar votes in the market for fast food workers and computer system workers determine the differences in the workers’ wages and incomes.

### **STUDENT STUMBLING BLOCK**

This chapter introduces students to many important concepts and terms that will be expanded upon in later chapters. These concepts and terms are vital to the understanding of economics. Current event examples can be helpful.

### **LECTURE NOTES**

- I. Learning objectives** – After the reading this chapter, students should be able to:
  - A. Differentiate between a command system and a market system.
  - B. List main characteristics of the market system.
  - C. Explain how the market system decides what to produce, how to produce it, and who obtains it.
  - D. Discuss how the market system adjusts to change and promotes progress.
  - E. Describe the mechanics of the circular flow model.
- II. Economic Systems**

Economic systems differ in two important ways: Who owns the factors of production and the method used to coordinate economic activity.

  - A. Command economy, socialism or communism:
    1. There is public (state) ownership of resources.
    2. Economic activity is coordinated by central planning
  - B. The market system:
    1. There is private ownership of resources.

2. Markets and prices coordinate and direct economic activity.
3. Each participant acts in his or her own self-interest.
4. In pure capitalism the government plays a very limited role.
5. In the U.S. version of capitalism, the government plays a substantial role.

### **III. Characteristics of the Market System**

- A. Private individuals and firms own most of the private property (land and capital).
  1. Private property, coupled with the freedom to negotiate binding legal contracts, enables individuals and businesses to obtain, control, use, and dispose of this property.
  2. Private property rights spur mutually agreeable transactions.
  3. Private property rights encourage investment, innovation, exchange of assets, maintenance of property, and economic growth.
  4. Property rights extend to intellectual property through patents, copyrights, and trademarks.
- B. Freedom of enterprise and choice exist.
  1. Freedom of enterprise means that entrepreneurs and businesses have the freedom to obtain and use resources, to produce products of their choice, and to sell these products in the markets of their choice.
  2. Freedom of choice means:
    - a. Owners of property and money resources can use resources as they choose.
    - b. Workers can choose the training, occupations, and job of their choice.
    - c. Consumers are free to spend their income in such a way as to best satisfy their wants.
- C. Self-interest
  - a. Self interest is one of the driving forces in a market system. Entrepreneurs try to maximize profits or minimize losses; resource suppliers try to maximize income; consumers maximize satisfaction.
  - b. As each tries to maximize profits, income, satisfaction, the economy will benefit if competition is present.
- D. Competition among buyers and sellers is a controlling mechanism.
  1. Large numbers of sellers mean that no single producer or seller can control the price or market supply.
  2. Large number of buyers means that no single consumer or employer can control the price or market demand.
  3. Depending upon market conditions, producers can enter or leave industry easily.
- E. Markets and prices
  1. A market system conveys the decisions of the many buyers and sellers of the product and resource markets.
  2. A market is an institution or mechanism that brings buyers and sellers into contact.

3. Individual decisions by buyers and sellers in the market determine the product and resource prices that, in turn, guide further decisions by resource owners, producers, and consumers.
  4. Those who respond to the market signals will be rewarded with profits and income.
- F. Reliance on technology and capital goods
1. Competition, freedom of choice, self-interest, and the potential of profits provide the incentive for capital accumulation (investment).
  2. Advanced technology and capital goods promote efficiency and greater output.
- G. Specialization
1. Division of labor allows workers to specialize.
    - a. People can take advantage of differences in abilities and skills.
    - b. People with identical skills may still benefit from specialization and improving certain skills. (Learning by doing)
    - c. Specialization saves time involved in shifting from one task to another.
  2. Geographic specialization: Regional and international specialization take advantage of localized resources.
- H. Use of money as a medium of exchange
1. Money substitutes for barter, which requires a coincidence of wants. (I may want what you produce but you may not want to exchange for what I have.)
  2. Willingness to accept money in place of goods permits 3-way trades (or multilateral trades). See Figure 2.1 and examples in text.
    - a. Floridians give money to Nebraskans for wheat, who give money to Idahoans for potatoes, who give money to Florida for oranges.
    - b. Foreign exchange markets permit Americans, Japanese, Germans, Britons, and Mexicans to complete international exchanges of goods and services.
    - c. Detroit autoworker produces crankshafts for Buicks. If the worker were paid in crankshafts, he would have to find grocers, clothing retailers, etc., who would be willing to exchange their products for a crankshaft. It is much more efficient to use money wages than to accept one's wages in crankshafts!
- I. Active, but limited government
1. Although the market system promotes efficiency, it has certain shortcomings (over production of goods with social costs, under production of goods with social benefits, tendency for business to increase monopoly power, macro instability).
  2. Chapter 5 deals with how the government can increase the overall effectiveness of the market system.

#### **IV. Five Fundamental Questions**

- A. Although the focus of this chapter is on the market system, the five fundamental questions must be answered by all economic systems.
1. What goods and services will to be produced?
  2. How will the goods and services be produced?
  3. Who will get the output?

4. How will the system accommodate change?
  5. How will the system promote progress?
- B. What will be produced?
1. In order to be profitable, businesses must respond to consumers' (individuals, other businesses, and the government) wants and desires.
  2. Consumer Sovereignty
    - a. Consumer sovereignty is the key to determining the types and quantities of the various products that will be produced. "Dollar votes" for a product when purchases are made and "dollar votes" against a product when products are ignored will determine which industries continue to exist and which individual products survive or fail.
    - b. **CONSIDER THIS ... McHits and McMisses**

In an effort to stimulate demand and respond to market trends and conditions, McDonald's has introduced a number of new menu items over the years. The success and failure of these new items illustrates the important role of the consumer in determining what will be produced.
    - c. Businesses are not really "free" to produce what they wish. They must match their production choices with consumer choices or face losses and eventual bankruptcy. Profit-seeking firms must consider the allocation of the "dollar votes" when they make their production decisions.
  3. As with producers of consumer goods and services, decisions of resource suppliers are driven by the desires of consumers for the products produced by the resources they own.
- C. How will the goods and services be produced?
1. The market system encourages and rewards those producers who are achieving least-cost production.
  2. Least-cost production techniques include: locating firms in the optimum location considering resource prices, resource productivity, and transportation costs, available technology, and resource prices in general.
  3. The most efficient technique will be the one that produces a given amount of output with the smallest input of scarce resources when both inputs and outputs are measured in dollars and cents.
- D. Who will get the output?
1. The answer to this question is directly related to how the income is distributed among the individuals and the households and the tastes and preferences of consumers.
  2. Products go to those who are willing and able to pay for them.
  3. The productivity of the resources, the relative supply of particular resources, and the ownership of the resources will determine the income of individuals and households.
  4. The resource markets, which determine income, are linked to this decision.
- E. How will the system accommodate change?



1. Markets are dynamic – what is efficient today may not be efficient tomorrow as tastes, technology, and resource supplies change. Prices help signal those changes.
  2. An increase in demand for some products (fruit juice) will lead to higher prices in those markets; a decrease in demand for other products (milk) will lead to lower prices in those markets.
  3. Increased demand leads to higher prices that induce greater quantities of output from suppliers. The opposite is true for a decrease in demand.
  4. Higher prices lead to more profits and new firms entering the market; lower prices lead to losses and firms leaving the industry.
  5. The guiding function of prices is essential to a well-functioning market system. In the absence of such signals, government or some similar institution would have to decide where resources are allocated, but without knowing what people in society want.
- F. How will the system promote progress?
1. The market system promotes technological improvements and capital accumulation.
  2. An entrepreneur or firm that introduces a popular new product will be rewarded with increased revenue and profits.
  3. New technologies that reduce production costs, and thus product price, will spread throughout the industry as a result of competition.
  4. Creative destruction occurs when new products and production methods destroy the market positions of firms that are not able or willing to adjust.
  5. Technological advances often require additional capital. Entrepreneurs cast “dollar votes” for capital, drawing resources to the production of capital goods.
- V. Competition and the “Invisible Hand”:**
- A. Competition is the mechanism of control for the market system. It not only guarantees that industry responds to consumer wants, but it also forces firms to adopt the most efficient production techniques.
  - B. Adam Smith talked of the “invisible hand” which promotes public interest through a market system where the primary motivation is self-interest. By attempting to maximize profits, firms will also be producing the goods and services most wanted by society.
  - C. Of the many merits of the market system, three stand out:
    1. Market systems promote *efficiency* in the allocation of resources.
    2. Market systems provide *incentives* for people to be productive through work effort and acquiring skills.
    3. Market systems provide a lot of personal *freedom* in making economic decisions.
- VI. The Demise of the Command Systems**
- Command systems in the Soviet Union, Eastern Europe, China eventually gave way to market systems. The failure of command systems can be attributed to two main problems:
- A. Coordination problem – it was difficult (if not impossible) for central planners to effectively coordinate the allocation of resources and satisfaction of wants of millions of consumers, resource suppliers, and businesses.

B.

1. If an industry failed to meet production targets it could disrupt production and resource allocation throughout the system.
2. Larger planned economies faced even greater difficulties because the greater number and complexity of allocation decisions to be made.
3. Without market signals (i.e. prices) it was difficult to measure success. Even if quantitative production targets were met, ambiguities in the targets led to perverse outcomes in terms of poor quality, excessive costs, and the wrong mix of goods.

C. Incentive problem – with central planners determining what and how much would be produced, and how much resource suppliers would receive, there was little incentive to innovate, contain costs, or otherwise improve the quantity and quality of goods and services.

D. **CONSIDER THIS ... The Two Koreas**

1. North Korea, under the influence of the Soviet Union, established a command economy emphasizing government ownership and central government planning.
2. South Korea, protected by the U.S., established a market economy based on private ownership and profit motive.
3. South Korea has experienced significantly higher GDP, GDP per capital, exports, and imports than North Korea, which maintains an agrarian economy.

**VII. The Circular Flow Model for a Market-Oriented System (Key Graph 2.2)**

A. There are two groups of decision makers in the private economy (when government has not yet been included): households and businesses.

1. The market system coordinates these decisions.
2. What happens in the resource markets?
  - a. Households sell resources directly or indirectly (through ownership of corporations).
  - b. Businesses buy resources in order to produce goods and services.
  - c. Flow of payments from businesses for the resources constitutes business costs and resource owners' incomes.
3. What happens in the product markets?
  - a. Households are on the buying side of these markets, purchasing goods and services.
  - b. Businesses are on the selling side of these markets, offering products for sale.
  - c. Flow of consumer expenditures constitutes sales receipts for businesses.
4. Circular flow model illustrates this complex web of decision-making and economic activity that give rise to the real and money flows.

B. Limitations of the model (not in text):

1. Does not depict transactions between households and between businesses.
2. Ignores government and the “rest of the world” in the decision-making process.
3. Does not explain how prices of products and resources are actually determined, but this is explained in Chapter 3.

**VIII. LAST WORD: Shuffling the Deck**

- A. If one thoroughly shuffles a deck of cards, there is a virtual 100% chance that the resulting arrangement of cards will be unlike any previous arrangement.
- B. Yet, even though there are tens of billions of resources in the world, these resources are arranged in such a way as to produce the products and services that serve human needs.
- C. Private property eliminates the possibility that resource arrangements will be random because each resource owner will choose a particular course of action if it promises rewards to the owner that exceed the rewards promised by all other available actions.
- D. The result is a complex and productive arrangement of countless resources.

**QUIZ**

1. Which statement best describes a command economy?
  - A. The production of goods and services is determined primarily by markets, but the allocation of goods and services is determined primarily by government
  - B. The production of goods and services is determined primarily by government, but the allocation of goods and services is determined primarily by markets
  - C. The production and allocation of goods and services is determined primarily through markets
  - D. The production and allocation of goods and services is determined primarily through government

Answer: D

2. Which statement is correct?
  - A. Freedom of choice and enterprise are essential elements of the market system
  - B. Producers are "kings" in a market economy because they determine what is produced
  - C. The market system is efficient at allocation of resources, but not consumer goods to their most valued uses
  - D. The operation of a market system eventually results in an equal distribution of income

Answer: A

3. In a competitive economy, prices:
- A. influence consumers in their purchases of goods and services.
  - B. influence businesses in their purchases of economic resources.
  - C. influence workers in making occupational choices.
  - D. do all of these.

Answer: D

4. The competitive market system:
- A. encourages innovation because government provides tax breaks and subsidies to those who develop new products or new productive techniques.
  - B. discourages innovation because it is difficult to acquire additional capital in the form of new machinery and equipment.
  - C. discourages innovation because firms want to get all the profits possible from existing machinery and equipment.
  - D. encourages innovation because successful innovators are rewarded with economic profits.

Answer: D

5. Which is *not* one of the Five Fundamental Questions?
- A. How will the goods and services be produced?
  - B. How should the system accommodate change?
  - C. Who is to receive the output of the system?
  - D. What goods and services should be produced by government?

Answer: D

6. The idea that firms and resource suppliers in seeking to further their own self-interests in a competitive market economy also simultaneously promotes the public or social interest is a description of:
- A. The guiding function of prices
  - B. Capital accumulation
  - C. The "invisible hand"
  - D. "Dollar votes"

Answer: C

7. Which of the following is a limitation of the simple circular flow model?
- A. product markets are ignored.
  - B. resource markets are ignored.
  - C. the determination of product and resource prices is not explained.
  - D. households are included, but not businesses.

Answer: C

8. Households and businesses are:
- A. both buyers in the resource market.
  - B. both sellers in the product market.
  - C. sellers in the resource and product markets respectively.
  - D. sellers in the product and resource markets respectively.

Answer: C

9. The influential book written by Adam Smith was:
- A. *The Worldly Philosophers*
  - B. *The Wealth of Nations*
  - C. *The Age of the Economist*
  - D. *The Affluent Society*

Answer: B

10. The circular flow model:
- A. Assumes that central planning is taking place
  - B. Illustrates how natural resources are created
  - C. Illustrates how money is created by the banking system
  - D. Illustrates the interdependence of businesses and consumers

Answer: D