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## **CHAPTER 2**

# **ECONOMIC SYSTEMS, RESOURCE ALLOCATION, AND SOCIAL WELL-BEING**

### **LESSONS FROM CHINA'S TRANSITION**

The transition of China's economy from centralized planning to a market-oriented economy provides an outstanding backdrop against which the efficiency of the market economy can be compared to that of a command economy. While this analysis is of necessity limited, students should come away with a clear notion of the importance of private property rights and individual choice within the market economy and how these are limited in the command economy.

We introduce students to the market process of resource allocation through supply and demand analysis. The presentation is designed to show that, with exceptions, the market is capable of bringing about an allocation of resources that maximizes social well-being without input from government. Contrasted with this, we discuss resource allocation and the resulting well-being when resources are allocated by government decree as would happen in a command economy.

### **TEACHING OUTLINE**

- I. Brief History of the Chinese economy
- II. Economic Systems
  - A. Pure market economy
    - 1. Private property rights
    - 2. Decentralized decision-making coordinated through markets
  - B. Pure command economy
    - 1. State ownership and/or control of economic resources
    - 2. Centralized planning
  - C. Mixed systems
    - 1. Transitional economy
- III. Market Structures
  - A. Pure Competition
    - 1. Large number of buyers and sellers

2. Each seller offers standardized product
  3. Product prices free to move up or down
  4. Buyers and sellers must be mobile
  5. Free entry and exit
- B. Pure monopolistic market
1. One seller with price control
  2. Blocked entry
- C. Imperfectly competitive markets
- IV. Demand and Supply
- A. Demand
1. Demand versus quantity demanded
  2. Demand is for a period of time
  3. Law of demand
    - a. Ceteris paribus
      - i. Income
      - ii. Price of related goods
      - iii. Tastes
      - iv. Buyer's expectations
      - v. Number of consumers
  4. Change in demand versus a change in quantity demanded
  5. Changes in the factors held constant along a demand curve
- B. Supply
1. Supply versus quantity supplied
  2. Supply is for a period of time

- 3. Law of supply
  - a. Ceteris paribus
    - i. Cost of production
    - ii. Price of related goods
    - iii. Seller's expectations
    - iv. Number of sellers
- 4. Changes in supply versus changes in quantity supplied
- 5. Changes in the factors held constant along a supply curve
- C. Market equilibrium and Social Well-being
  - 1. Equilibrium price and quantity
    - a. Prices above equilibrium
    - b. Prices below equilibrium
- V. Resource Allocation in a Command Economy
  - A. Centralized planning
    - 1. The Communist Revolution in China
    - 2. Establishment of a Command Economy
  - B. Problems with centralized planning
    - 1. Initial Phase
    - 2. Great Leap Forward
      - a. State Planning Commission
    - 3. Cultural Revolution
  - C. Shortcomings of Central Planning
    - 1. Informational requirements
    - 2. Incentives for efficient production
    - 3. Heavy industry versus consumer goods

## VI. The New Chinese Economy

### A. China's transition to a market oriented economy

1. Agricultural reform
2. Industrial reform

### B. China's Transition to Markets: What are the Facts?

1. Lessons for other economies

### C. Problems of transition in China

1. Unemployment and inflation
2. Corruption
3. Population pressures
4. Pollution problems
5. The desire for democracy

## VII. Summary

## CORE ECONOMIC PRINCIPLES

- ◆ Market Structures - The concept of market structures, discussed further in Chapter 8, is presented in this chapter. Market structures are important in microeconomic analysis; the concepts of competition and monopoly come up throughout the text, economics, and the "real world."
- ◆ Demand and Supply - The most important model introduced and applied in this chapter is the supply and demand model. Economic systems are used to introduce students to this model, used throughout the text and all of economics. The chapter leads into Chapter 3, which applies the supply and demand model to the analysis of price ceilings and floors.

## RESOURCES

### Data Links

For up-to-date information on China, consult the CIA Factbook at <https://www.cia.gov/library/publications/the-world-factbook/index.html>.

## Curriculum Ideas

For a classroom experiment on demand, see Expnomics, Vol. 1, #2. For a classroom experiment on supply and demand, see Vol. 3, #1.

<http://www.marietta.edu/~delemeeg/expnom.html>

Introductory Economics Videos from Films for the Humanities and Sciences, *Understanding Free Market Economics* videotape series.

## **DATA SOURCES**

The following data sources may be used to update and refine the statistics found in this chapter:

- A great deal of social, demographic, historical, cultural, and economic data is available for most countries of the world through the Central Intelligence Agency's public web site found at. <https://www.cia.gov/library/publications/resources/the-world-factbook/> Especially interesting for students is to have them compare and contrast resource endowments of various countries and then relate resource endowments to economic and political systems and finally to measures of economic well-being.

## **DISCUSSION QUESTIONS**

1. Compare and contrast the pure market and pure command economic systems. Where does the United States fit on this continuum?

*Solution:*

*The U.S. is mixed economy due to the fact that it has both the elements of pure market economy (private ownership) and pure command economy (government intervention in the economy). But the U.S. is much closer to the end of pure market economy.*

2. One of the important characteristics of the purely competitive market is that there must be free entry to and exit from the market. Why is this condition necessary?

*Solution:*

*Without free entry and exit, there would be high barriers in the market that prevent the entry of new firms. The existing firm could establish a monopolistic status due to the high barriers and lack of competition.*

3. Suppose that initially the market for new cars in an area approaches being purely competitive. Describe the changes consumers might notice if that market becomes more monopolistic.

*Solution:*

*If the market becomes more monopolistic, consumers will see higher price and lower quantity of transaction compared with purely competitive market.*

4. The outcomes for consumers are expected to be quite different if a market is purely competitive rather than purely monopolistic. List some of the differences you would expect and explain your choices.

*Solution:*

*Under the purely competitive market, consumers are expected to pay lower price in comparison with purely monopolistic market; they will have more choices; and they also tend to buy more goods. All these outcomes arise from the competition created by many participating sellers and the potential sellers who are ready to enter the market without difficulty.*

5. Without reference to a diagram, explain the difference between a change in demand and a change in quantity demanded.

*Solution:*

*Change in quantity demanded is caused by the change in the good's price. Change in demand is caused by anything other than the good's price, e.g. income, consumer's preference, number of buyers, etc.*

6. Discuss: "Recently the price of gas went up, and at the same time the quantity of gas purchased increased. This is a clear violation of the law of demand."

*Solution:*

*This phenomenon seems to be contradictory to the law of demand, but actually not. When the law of demand states the negative relationship between the price and quantity demanded, it assumes that everything else stays the same. In real world situation, all other things may not stay the same. For example, if income increases at the same time when the price of gas goes up, and if the impact of income change is greater than the price, the demand of gas may go up as well.*

7. List and explain the factors we typically hold constant when drawing a demand curve. What additional factors do you think could be added to the list?

*Solution:*

*A typical list includes: income, consumer's preference, prices of related goods, expectations, number of buyers in a market. Anything else that affects these factors could be included as well, e.g. foreign trade policy (tariff) of our trading partner, change of the product quality, etc.*

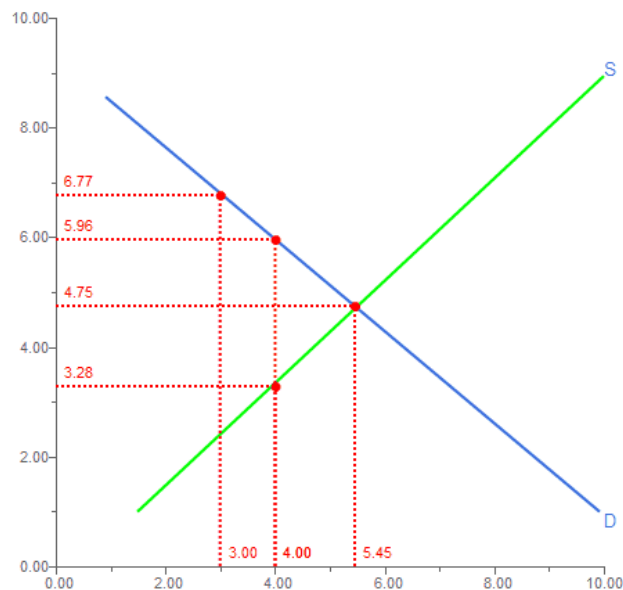
8. List and explain the factors that we typically hold constant when drawing a supply curve. What additional factors do you think could be added to the list?

*Solution:*

*The factors we typically hold constant when drawing a supply curve include: costs of production, price of related goods, number of sellers in the market, technology, and seller's expectations. Other factors could be natural disasters, war, government regulations, etc.*

9. With reference to a supply-and-demand diagram, explain why the equilibrium reached by a market typically reflects a well-being-maximizing production level of the good or service.

*Solution:*



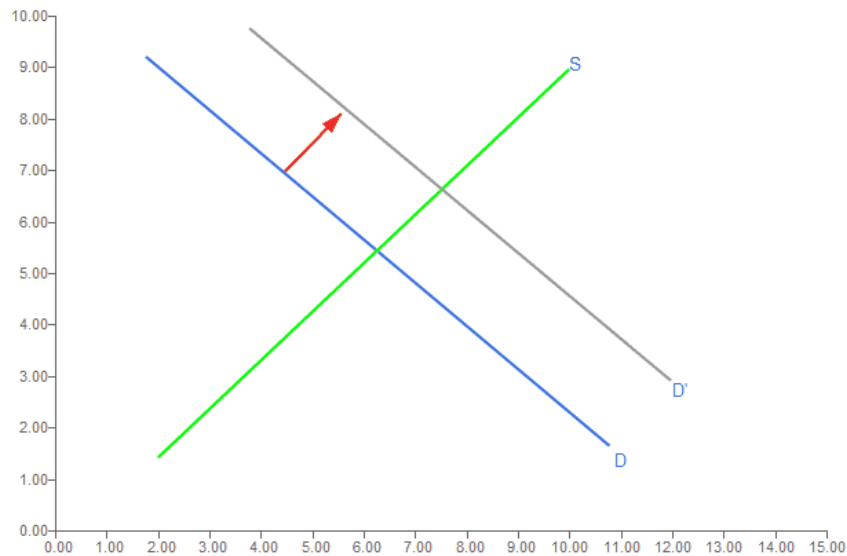
At the market equilibrium, the amount of goods buyer would like to buy happens to be the same as the amount the seller would like to sell (5.45), and the price the consumer is willing to pay equals the price the seller is willing to accept (\$4.75). So scarce resources are allocated in a way that maximizes the social wellbeing. Any deviation from the equilibrium implies more social well-being can be generated by reallocating the resources. E.g. if market price is above the equilibrium level at \$6.77, a surplus occurs. The quantity of transaction (3) falls short of the equilibrium level. At the current quality of transaction 3, if seller produces and sells one more unit, the minimum price the seller is willing to accept (\$3.28) is lower than the highest price the buyer is willing to offer (\$5.96). This implies that an additional social value brought about by the new unit of good is greater than the additional cost incurred to produce it. A net social well-being could be generated by producing this unit. This holds true for all the additional units up to the equilibrium quantity 5.45, where the social well-being is maximized.

10. Suppose that during this year there is a very large personal income tax cut. Show and explain the effects you would expect on the market for new cars.

*Solution:*

A large tax cut will increase the personal income, which in turn will increase the demand and shifting the demand curve to the right.





11. Explain the difference between inferior and normal goods.

*Solution:*

*Normal goods are the type whose demand increases with the income, while inferior goods are the type whose demand decreases as income increases.*

12. Does the demand for an inferior good behave the same as that for a normal good when consumer income rises? Explain.

*Solution:*

*No. Demand for an inferior good decreases as consumer income rises, while demand for a normal good increases with income.*

13. Hot dogs and hot dog buns are excellent examples of complementary or substitute goods. Explain.

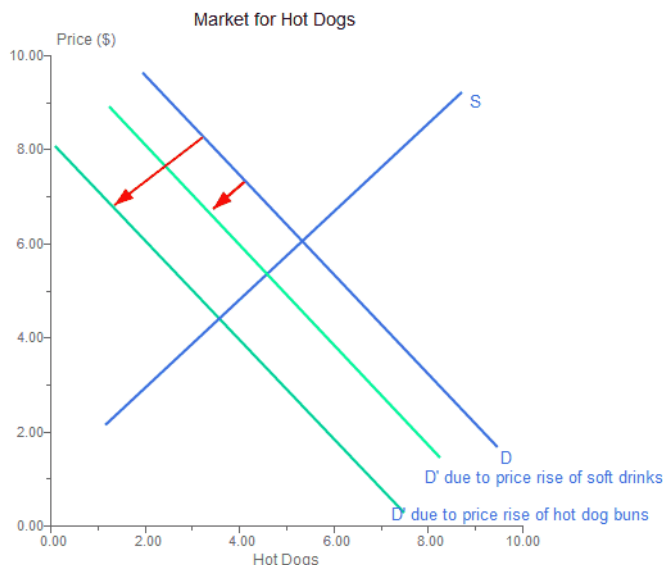
*Solution:*

*Hot dogs and hot dog buns are example of complementary goods, because they tend to be bought and used together.*

14. Suppose the market for hot dogs is initially in equilibrium. Would you expect an increase in the price of hot dog buns to cause the same change in the market for hot dogs as would an increase in the price of soft drinks? Show each and explain.

*Solution:*

*Although both hot dog buns and soft drinks can be considered complementary goods with hot dogs. The connection between hot dog buns and hot dogs are stronger than that between soft drinks and hot dogs. So we would expect to see demand for hot dogs to decrease more after an increase in the price of hot dog buns than after an increase in the price of soft drinks, as shown in the following diagram:*



15. Explain why the transition from a command economy to a more market-oriented economy often entails a difficult period of transition.

*Solution:*

*Among the possible reasons for the difficulty in the transition are: (1) changing economic system to allow for private ownership is a big challenge since it was prohibited before; (2) introducing free supply and demand forces into the labor and capital markets implies unemployment and inflation that were never seen before under a command economy; (3) old political system will generate a great deal of corruption as bureaucrats actively engage in rent seeking; (4) heavy pollution resulted from the drive to higher economic growth; (5) increasing gap between the rich and the poor.*

16. Using the Chinese experience as the example, argue the benefits of the pure market economic system relative to the pure command system.

*Solution:*

*Since the economic reform in 1978, China has moved from a pure command economy to a mixed system that combines the elements of the market and command systems. Based on the Chinese economy's performance in more than three decades, its economic reform is highly successful. The size of Chinese economy is now ranked number two in the world. China's per capita real GDP has greatly increased and its economic growth rate is among the highest in the world. The stellar performance benefited greatly from the move towards the market economic system. Students may provide different explanations to this question. At the fundamental level Chinese economic reform took advantage of the market system and addressed two most important problems existed under command economy: inefficiency and lack of incentives in the economic activities.*

17. Discuss the three major problems embodied in the near-pure command system that existed in China from 1949 to 1978.

*Solution:*

*Students discussion should focus on the three major problems in Chinese economy before the economic reform in 1978: (1) Lack of information needed for efficient production, transaction and*

*distribution of goods and services; (2) Lack of incentives for efficient production; (3) Emphasizing heavy industry at the cost of consumer goods.*

18. Most of the republics created by the fall of the USSR in 1991 have moved, to one degree or another, toward the market approach to economic organization. These economies have had varying degrees of success, but none has done as well as China. Why might this be the case?

*Solution:*

*Students may provide various answers in their discussion. But one important factor could be the political stability enjoyed by China during its transition period. In contrast, transition in the former Soviet republics happened as a result of political collapse of the Soviet Union. In these republics transition is more difficult than China because they had to simultaneously rebuild both the economic and political systems.*

19. The Chinese leader perhaps most responsible for putting China on the path to market reform is Deng Xiaoping, whose approach to reform is summarized in the saying “crossing the river while feeling the rocks.” What does Deng mean by this, and to what extent do you think China’s success in reform is due to this approach?

*Solution:*

*The Chinese saying means, when economic reform is in uncharted waters, you have to be willing to experiment and explore to find your way, moving forward steadily and carefully. China’s success in its economic reform has benefited greatly from this approach.*

# **Chapter 2**

## **Economic Systems, Resource Allocation, and Social Well-Being: Lessons From China's Transition**

# Learning Objectives

After completing this chapter, you will be able to:

**LO2-1** Describe the characteristics of differing types of economic systems.

**LO2-2** Explain how resources are allocated in different economic systems.

**LO2-3** Discuss the relative performance of pure market versus pure command economies.

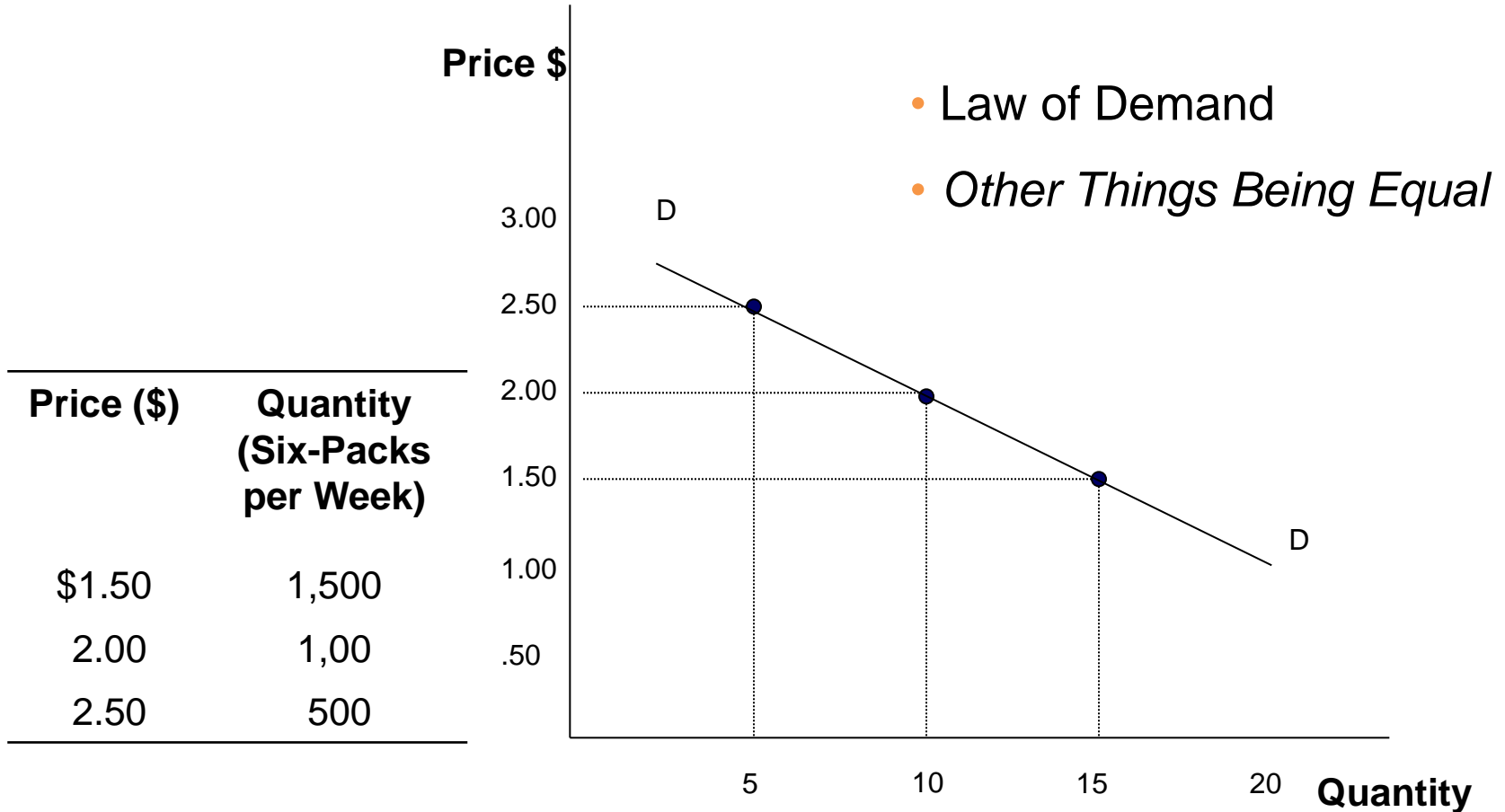
# Economic Systems

- Pure Market Economy
  - Private property rights
  - Decentralized decision making coordinated through markets
- Pure Command Economy
  - State ownership and/or control of economic resources
  - Centralized planning
- Mixed Systems
  - Transitional economy

# Resource Allocation in a Market Economy

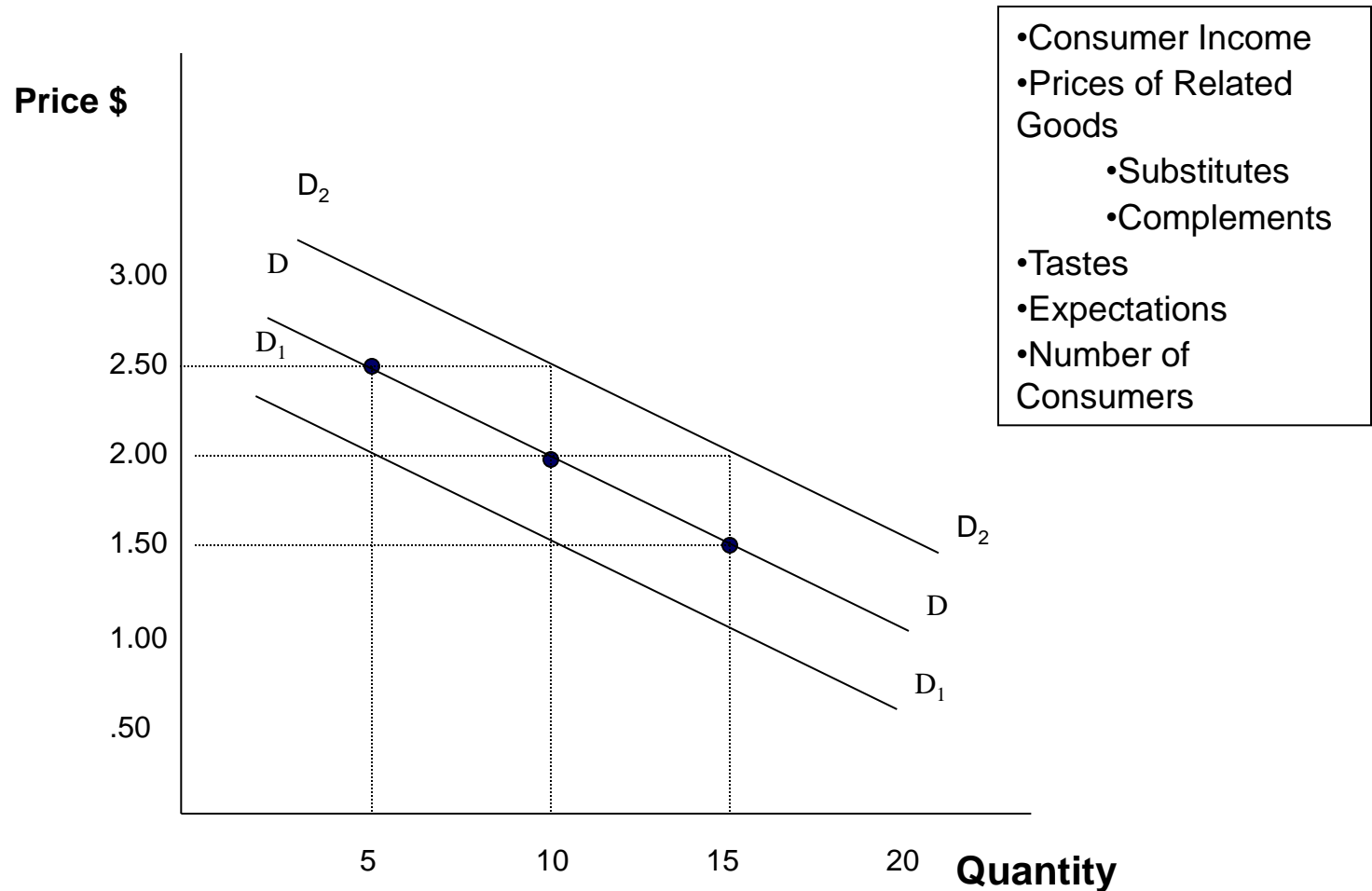
- Market Structure
  - Purely Competitive Markets
    - ◆ Large number of buyers and sellers
    - ◆ Each seller offers standardized product
    - ◆ Product prices free to move up or down
    - ◆ Buyers and sellers must be mobile
    - ◆ Freedom of entry and exit
  - Purely Monopolistic Markets
    - ◆ One seller
  - Imperfectly Competitive Markets

# Demand

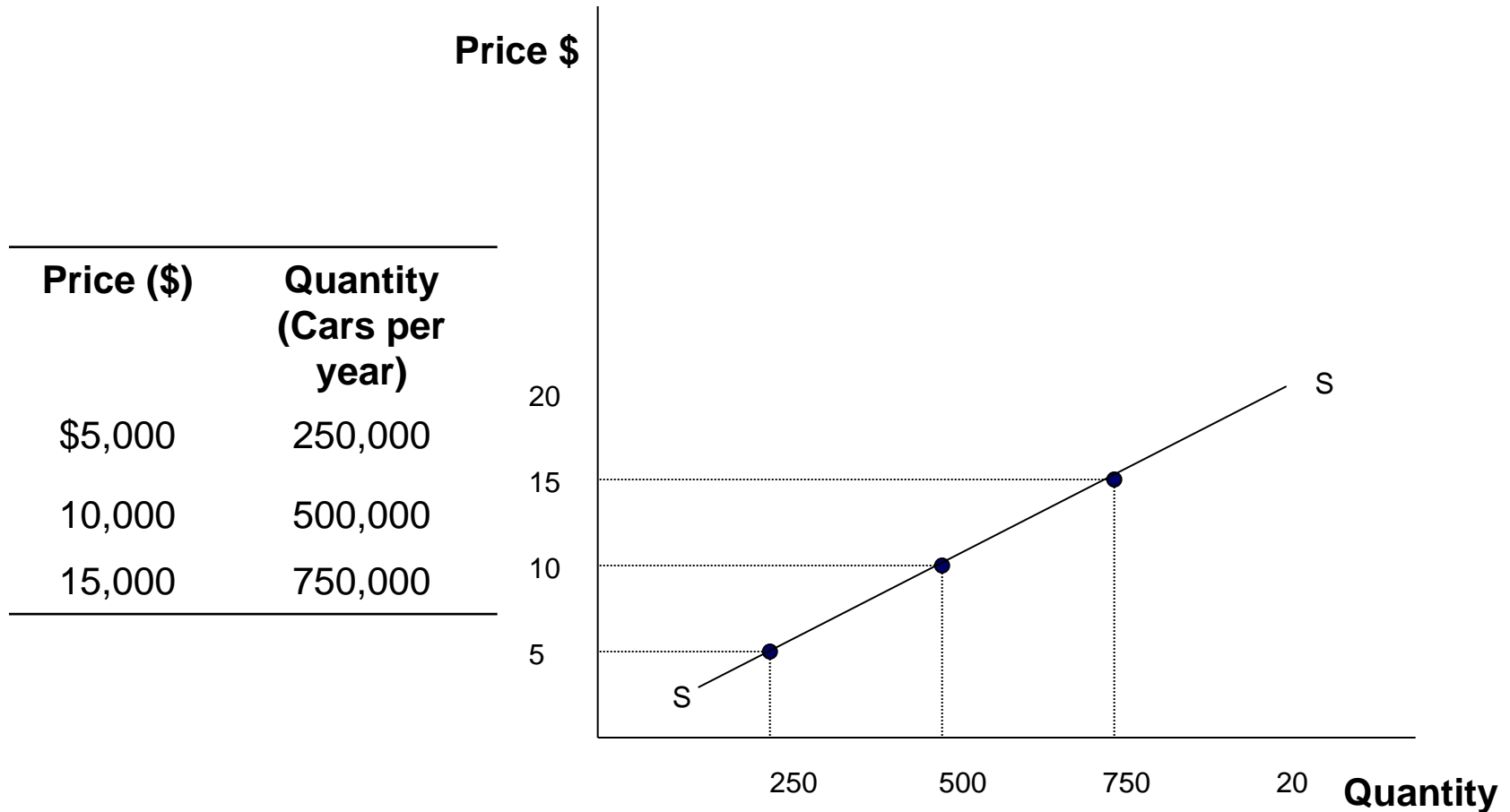




# Quantity Demanded versus Demand

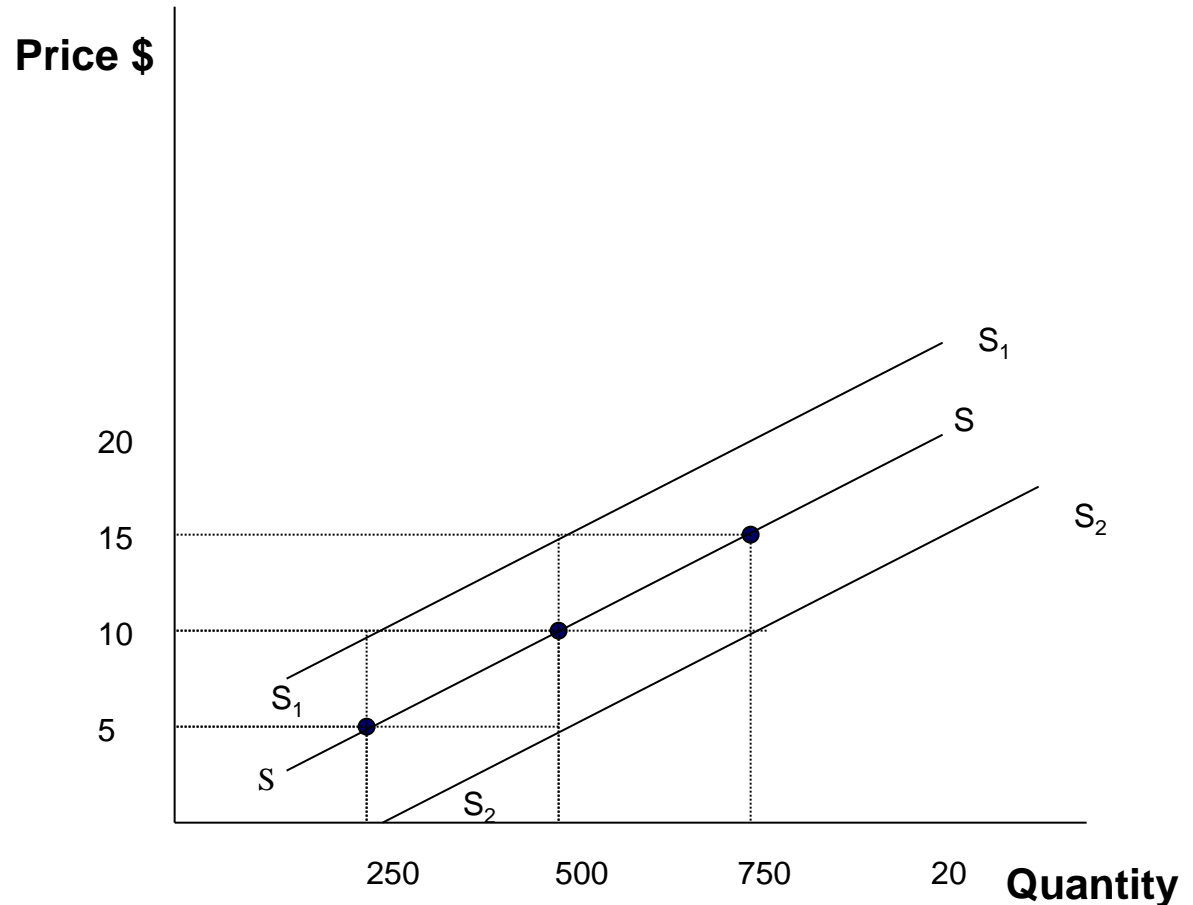


# Supply

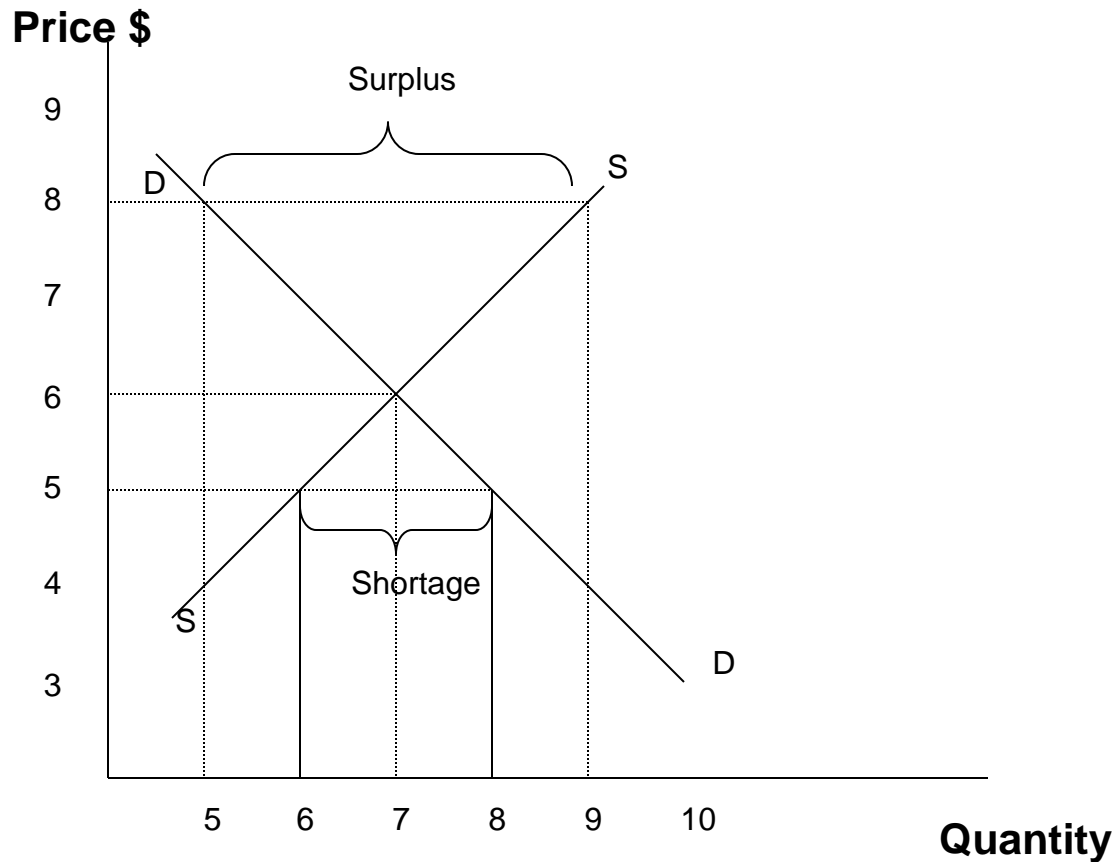


# Quantity Supplied versus Supply

- Cost of Production
- Prices of Related Goods
- Seller's Expectations
- Number of Sellers



# Equilibrium



# Resource Allocation in a Command Economy

- Centralized Planning
  - The Communist Revolution in China
  - Establishment of a Command Economy
    - ◆ State Planning Commission

# Shortcomings of Central Planning

- Informational Requirements
- Incentives for Efficient Production
- Heavy Industry versus Consumer Goods

# China's Transition to a Market-Oriented Economy

- Agricultural Reform
- Industrial Reform
- Lessons for Other Economies

# Problems of Transition in China

- Unemployment and inflation
- Corruption
- Population pressures
- Pollution problems
- The Desire for Democracy