

## Price Takers and the Competitive Process

**Full Length Text** — Part: 5 Chapter: 21  
**Micro Only Text** — Part: 3 Chapter: 9

To Accompany "Economics: Private and Public Choice 11th ed."  
James Gwartney, Richard Stroup, Russell Sobel, & David Macpherson  
Slides authored and animated by:  
James Gwartney, David Macpherson, & Charles Skipton

[Next page](#) →

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



## Price Takers and Price Searchers

← [Jump to first page](#) →

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



## Price Takers

- **Price Takers** produce identical products and each seller is small relative to the market.
  - Each seller has little or no effect on the market price.
  - Each firm can sell as much as it wants at the market price
    - It is unable to sell any output at a price greater than the market price
  - *Example:* agriculture (wheat, corn, soybeans)
  - It is also called a **purely competitive** market.

← [Jump to first page](#) →

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### Price Searchers

- **Price Searchers** face a downward sloping demand curve for their product.
- The amount that the firm is able to sell is inversely related to the price it charges.
- *Examples:*
  - Nike
  - General Motors
  - Exxon
  - most retail stores

◀ [Jump to first page](#) ▶ Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### Why Study Price Takers?

- Why do we study price taker markets?  
The competitive price-taker model ...
- applies to some markets, such as agricultural products.
- helps us understand the relationship between individual firms and market supply.
- increases our knowledge of competition as a dynamic process.

◀ [Jump to first page](#) ▶ Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### What are the Characteristics of Price-Taker Markets?

◀ [Jump to first page](#) ▶ Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### Characteristics of the Competitive Price-Taker Markets

- The characteristics of price-taker markets:
  - homogeneous products
    - all firms produce an identical product
  - many firms
    - there are numerous suppliers in the market
  - small firms
    - each firm supplies only a small portion of the total market output
  - no entry / exit barriers
    - firms may freely enter and exit the market

◀ [Jump to first page](#) ▶ Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

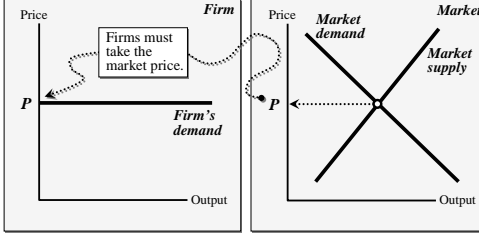
---

---



### Price Taker's Demand Curve

- Market forces (*supply & demand*) determine price.
- **Price takers** have no control over the price that they may charge in the market. If such a firm was to charge a **price** above that **established by the market**, consumers would simply buy elsewhere.
- Thus, the **firm's demand curve** is **perfectly elastic** – it is horizontal at the price determined in the market.



◀ [Jump to first page](#) ▶ Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### How does the Price-Taker Maximize Profit?

◀ [Jump to first page](#) ▶ Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---





### Short Run Supply Curve

- The *firm's short-run supply curve*:
  - A firm maximizes profits when it produces at  $P = MC$  and variable costs are covered.
  - A firm's short-run supply curve is the segment of its *marginal cost* curve above *average variable cost*.
- The *market's short-run supply curve*:
  - The short-run market supply curve is the horizontal summation of the all the firms' short-run supply curves (segment of firms' *MC* curves above *AVC*).

[◀ Jump to first page ▶](#)    Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

### The Short-Run Market Supply Curve

[◀ Jump to first page ▶](#)    Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

### Supply Curve for the Firm & Market

- Given resource prices, the firm's marginal cost curve (above *AVC*) is the firm's supply curve.
- As price rises above the short-run shutdown price of  $P_1$ , the firm will supply additional units of the good.
- The short-run market supply curve ( $S_{sr}$ ) is merely the sum of the firms' supply (*MC*) curves.
- Note that below  $P_1$  no quantity is supplied as  $P < AVC$ .

*Firm*

*Market*

[◀ Jump to first page ▶](#)    Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---


---

---

---

---

---



**Questions for Thought:**

1. How do firms that are price takers differ from those that are price searchers? What are the distinguishing characteristics of a price taker market?
2. Why is market competition important? Is there a positive or negative impact on the economy when strong competitive pressures drive firms out of business? Why or why not?

[Jump to first page](#) Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



**Questions for Thought:**

3. Which of the following is a competitive price taker?
  - a. McDonald's, a restaurant chain that competes in numerous locations
  - b. a bookstore located a few blocks from a major university
  - c. a Texas rancher that raises beef cattle
4. "A restaurant in a summer tourist area that is highly profitable during the summer but unable to cover even its variable costs during the winter months should operate during all months of the year as long as its profits during the summer exceed its losses during the winter." Is this statement true?

[Jump to first page](#) Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



**Price and Output in Price-Taker Markets**

[Jump to first page](#) Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

### Economic Profits and Entry

- If price exceeds *average total cost*, firms will earn an *economic profit*.
- *Economic profit* induces both:
  - the *entry* of new firms, and,
  - expansion in the scale of operation of existing firms.
- Capital moves into the industry, shifting the market supply to the right. This will continue until price falls to *ATC*.
- In the long-run, competition drives economic profit to zero.

[◀ Jump to first page ▶](#)    Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Economic Losses and Exit

- If *average total cost* exceeds price, firms will suffer an *economic loss*.
- *Economic losses* induce:
  - the *exit* of firms from the market, and,
  - a reduction in the scale of operation of the remaining firms.
- As market supply decreases, price will rise to *average total cost*.
- Thus, profits and losses move price toward the zero-profit long-run equilibrium.

[◀ Jump to first page ▶](#)    Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Long-run Equilibrium

- The two conditions necessary for long-run equilibrium in a price-taker market are depicted here.
- The quantity supplied and the quantity demanded must be equal in the *market*, as shown below at  $P_1$  with output  $Q_1$ .
- Given the price established in the market, *firms* in the industry must earn zero economic profit ( $P = ATC$ ).

*Firm*

*Market*

[◀ Jump to first page ▶](#)    Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Adjusting to Expansion in Demand

- Consider the market for toothpicks. A new candy that sticks to teeth causes the **market demand** for toothpicks to increase from  $D_1$  to  $D_2$  ... market price increases to  $P_2$  ... shifting the firm's **demand curve** upward. At the higher price, firms expand output to  $q_2$  and earn short-run profits.
- Economic profits will draw competitors into the industry, shifting the market **supply curve** from  $S_1$  to  $S_2$ .

◀ Jump to first page ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Adjusting to Expansion in Demand

- After the increase in **market supply**, a new equilibrium is established at the original market price  $P_1$  and a larger rate of output ( $Q_3$ ).
- As the market price returns to  $P_1$ , the **demand curve** facing the firm returns to its original level.
- In the long-run, economic profits are driven down to zero.
- Note that here the **long-run market supply curve** is flat ( $S_{lr}$ ).

◀ Jump to first page ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Adjusting to a Decline in Demand

- If, instead, something causes **market demand** for toothpicks to decrease from  $D_1$  to  $D_2$  ... the market price falls to  $P_2$  ... shifting the firm's **demand curve** downward, leading to a reduction in output to  $q_2$ . The firm is now making losses.
- Short-run losses cause some competitors to exit the market, and others to reduce the scale of their operation, shifting the market **supply curve** from  $S_1$  to  $S_2$ .

◀ Jump to first page ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Adjusting to a Decline in Demand

- After the decrease in **market supply**, a new equilibrium is established at the original market price  $P_1$  and a smaller rate of output  $Q_3$ .
- As the market price returns to  $P_1$ , the **demand curve** facing the firm returns to its original level.
- In the long-run, economic profit returns to zero.
- Note that here the **long-run market supply** curve is flat  $S_{lr}$ .

◀ Jump to first page ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Long Run Supply

- **Constant-Cost Industry:**  
industry where per-unit costs remain unchanged as market output is expanded
  - occurs when the industry's demand for resource inputs is small relative to the total demand for the resources
  - The long-run market supply curve in a **constant-cost industry** is horizontal.

◀ Jump to first page ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Long Run Supply

- **Increasing-Cost Industry:**  
industry where per-unit cost rises as market output is expanded
  - results because an increase in industry output generally leads to stronger demand and higher prices for the inputs
  - The long-run market supply curve in a **increasing-cost industry** is upward-sloping.
  - This is the most common type of industry.

◀ Jump to first page ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Long Run Supply

- **Decreasing-Cost Industry:** industry where per-unit costs decline as market output expands
  - implies either economies of scale exist in the industry or that an increase in demand for inputs leads to lower input prices
  - The long-run market supply curve in a **decreasing-cost industry** is downward-sloping.
  - **Decreasing-cost industries** are rare.

Copyright © 2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Increasing Costs & Long-Run Supply

- Consider an increase in the **market demand** that leads to a higher market price, leading to short-run profits for firms.
- Economic profit entices some new firms to enter the market and others to increase the scale of their operation ... shifting the **market supply** curve out. The stronger demand for resources (*inputs*) pushes their price up. Consequently, the firm's costs are now higher ( $ATC_2$  &  $MC_2$ ).

**Firm**

**Market**

Copyright © 2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Increasing Costs & Long-Run Supply

- The competitive process continues until economic profits are eliminated. This occurs at equilibrium price  $P_3 < P_2$  and output level  $Q_3 > Q_2$ .
- Because this is an **increasing-cost industry**, expansion in market output leads to a higher equilibrium price.
- Thus, the long-run supply curve  $S_{lr}$  is upward sloping.

**Firm**

**Market**

Copyright © 2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

---

---

### Supply Elasticity and the Role of Time

- In the short run, fixed factors of production such as plant size limit the ability of firms to expand output quickly.
- In the long run, firms can alter plant size and other fixed factors of production.
- Therefore, the market supply curve will be more elastic in the long run than in the short run.

[Jump to first page](#)      Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

### Time and the Elasticity of Supply

- The elasticity of the market **supply** curve usually increases as time allows for adjustment to a change in price.
- Consider the market **supply** curve  $S_{t1}$ . Given price  $P_1$  at time 1,  $Q_1$  is supplied.
- If the market price increases to  $P_2$ , initially  $Q_2$  is supplied, but with time the number of firms and their scale changes.
- Given this new higher price, as time passes, larger and larger quantities of the good are brought to market ( $Q_3, Q_4, Q_5$ ).
- The slope of the market **supply** curve becomes flatter and flatter (*more and more elastic*) as the time horizon expands

[Jump to first page](#)      Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---

---

---

### Role of Profits and Losses

[Jump to first page](#)      Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---


---

---

---

---

---



### Profits and Losses

- Firms earn an *economic profit* by producing goods that can be sold for more than the cost of the resources required for their production.
- **Profit** is a reward for production of a product that has greater value than the value of the resources required for its production.
- **Losses** are a penalty for the production of a good that consumers value less highly than the value of the resources required for its production.

◀ [Jump to first page](#) ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### Competition Promotes Prosperity

◀ [Jump to first page](#) ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



### Competitive Process

- The competitive process provides a strong incentive for producers to operate efficiently and heed the views of consumers.
- Competition and the market process harness self-interest and use it to direct producers into wealth-creating activities.

◀ [Jump to first page](#) ▶

Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



**Questions for Thought:**

1. If the firms operating in a competitive price taker market are making economic profit, what will happen to the market supply and price in the future?
2. How will an unanticipated increase in demand for a price-taker's product affect the following in a market initially in long-run equilibrium?
  - a. short-run market price, output, and profitability
  - b. long-run market price, output, and profitability

[Jump to first page](#) Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



**Questions for Thought:**

3. Which of the following will cause the long run *market supply* curve for most products supplied in competitive price taker markets to slope upward to the right?
  - a. higher profits as industry output expands
  - b. higher resource prices and costs as industry output expands
  - c. the presence of economies of scale as the industry output expands
4. *Which of the following is true?* Self-interested business decision makers operating in competitive markets have a strong incentive to
  - a. produce efficiently (*at a low-cost*).
  - b. give consumers what they want.
  - c. search for innovative improvements.

[Jump to first page](#) Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---


---

---

---

---

---



**End  
Chapter 21**

[Jump to first page](#) Copyright ©2006 Thomson Business and Economics. All rights reserved.

---

---

---

---

---

---

---

---