The Big Picture

- Chapter 13: The cost of production
- Now, we will look at firm's revenue
  - But revenue depends on market structure

1. Competitive market (chapter 14)
2. Monopoly (chapter 15)
3. Monopolistic Competition (this chapter)
4. Oligopoly (chapter 17)
   - Are there other types of markets? Yes, not now

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

SUMMARY

- For a firm in a perfectly competitive market, price = marginal revenue = average revenue.
- If $P > AVC$, a firm maximizes profit by producing the quantity where $MR = MC$. If $P < AVC$, a firm will shut down in the short run.
- If $P < ATC$, a firm will exit in the long run.
- In the short run, entry is not possible, and an increase in demand increases firms' profits.
- With free entry and exit, profits = 0 in the long run, and P = minimum ATC.

3

Perfect Competition

- Products are Perfect Substitutes
- Result: Price Taking
- P = MR = MC
- SR: Will operate if P > AVC (FC is sunk)
- LR: Will operate at P = ATC
  - Firms enter if P > ATC; exit if P < ATC

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

SUMMARY

- A monopoly firm is the sole seller in its market. Monopolies arise due to barriers to entry, including: government-granted monopolies, the control of a key resource, or economies of scale over the entire range of output.
- A monopoly firm faces a downward-sloping demand curve for its product. As a result, it must reduce price to sell a larger quantity, which causes marginal revenue to fall below price.

SUMMARY

- Monopoly firms maximize profits by producing the quantity where marginal revenue equals marginal cost. But since marginal revenue is less than price, the monopoly price will be greater than marginal cost, leading to a deadweight loss.
- Monopoly firms (and others with market power) try to raise their profits by charging higher prices to consumers with higher willingness to pay. This practice is called price discrimination.

SUMMARY

- Policymakers may respond by regulating monopolies, using antitrust laws to promote competition, or by taking over the monopoly and running it. Due to problems with each of these options, the best option may be to take no action.
- Or, just auction off the market. (Demsetz, 1968)

Monopoly

- MR=MC to maximize profit (still true!)
- But, P > MR (D - downward sloping)
- Welfare Cost of a Monopoly:
  - Profits (unfair??) vs. DWL (efficiency loss!!)
- Cures? Do nothing? Auction off the market
- Homework: Mankiw, Ch. 15, pp. ?-?,
  - Problem 1, 3, 7, 9, 11, 12, 13????

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

N. Gregory Mankiw

Principles of
Economics
Sixth Edition

16

Monopolistic Competition

Premium PowerPoint Slides by Ron Cronovich

Modified by Joseph Tao-yi Wang

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

In this chapter, look for the answers to these questions:

- What market structures lie between perfect competition and monopoly, and what are their characteristics?
- How do monopolistically competitive firms choose price and quantity? Do they earn economic profit?
- In what ways does monopolistic competition affect society's welfare?
- What are the social costs and benefits of advertising?

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

INTRODUCTION: Between Monopoly and Competition

Two extremes

- Perfect competition (**perfect substitutes**): many firms, identical products
- Monopoly (**no close substitutes**): one firm

In between these extremes: imperfect competition

- **Oligopoly**: only a few sellers offer similar or identical products.
- **Monopolistic competition**: many firms sell similar but not identical products.
  = Partial Substitutes!

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Characteristics & Examples of Monopolistic Competition

Characteristics:

- Many sellers
- Product differentiation
  → Location, location, location! (產品定位)
- Free entry and exit

Examples:

- apartments
- books
- bottled water
- clothing
- fast food

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Comparing Perfect & Monop. Competition

	Perfect competition	Monopolistic competition
number of sellers	many	many
free entry/exit	yes	yes
long-run econ. profits	zero	zero
the products firms sell	identical	differentiated
firm has market power?	none, price-taker	yes
D curve facing firm	horizontal	downward-sloping

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Comparing Monopoly & Monop. Competition

	Monopoly	Monopolistic competition
number of sellers	one	many
free entry/exit	no	yes
long-run econ. profits	positive	zero
firm has market power?	yes	yes
D curve facing firm	downward-sloping (market demand)	downward-sloping
close substitutes	none	many

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

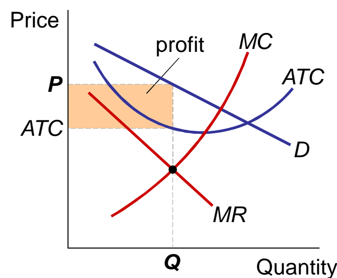
A Monopolistically Competitive Firm Earning Profits in the Short Run

The firm faces a downward-sloping *D* curve.

At each **Q**, *MR* < *P*.

To maximize profit, firm produces **Q** where *MR* = *MC*.

The firm uses the *D* curve to set *P*.

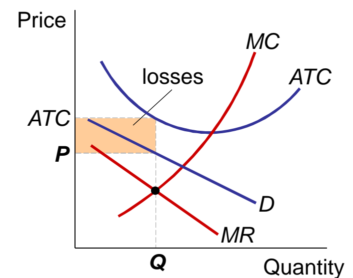


© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

A Monopolistically Competitive Firm With Losses in the Short Run

For this firm, *P* < *ATC* at the output where *MR* = *MC*.

The best this firm can do is to minimize its losses.



© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Monopolistic Competition and Monopoly

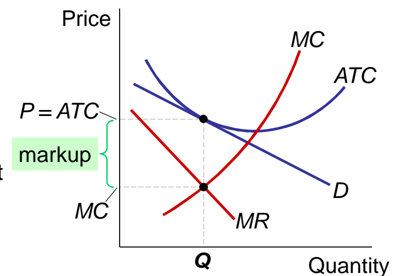
- *Short run*: Under monopolistic competition, firm behavior is very similar to monopoly.
- *Long run*: In monopolistic competition, entry and exit drive economic profit to zero.
  - If profits in the short run: New firms enter market, taking some demand away from existing firms, prices and profits fall.
  - If losses in the short run: Some firms exit the market, remaining firms enjoy higher demand and prices.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

A Monopolistic Competitor in the Long Run

Entry and exit occurs until *P* = *ATC* and profit = zero.

Notice that the firm charges a markup of price over marginal cost and does not produce at minimum *ATC*.



© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Why Monopolistic Competition Is Less Efficient than Perfect Competition

1. ***Excess capacity***
   - The monopolistic competitor operates on the downward-sloping part of its *ATC* curve, produces less than the cost-minimizing output.
   - Under perfect competition, firms produce the quantity that minimizes *ATC*.
2. ***Markup over marginal cost***
   - Under monopolistic competition, *P* > *MC*.
   - Under perfect competition, *P* = *MC*.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Monopolistic Competition and Welfare

- Monopolistically competitive markets do not have all the desirable welfare properties of perfectly competitive markets.
- Because *P* > *MC*, the market quantity is below the socially efficient quantity.
- Yet, not easy for policymakers to fix this problem: Firms earn zero profits, so cannot require them to reduce prices.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Monopolistic Competition and Welfare

- Number of firms in the market may not be optimal, due to external effects from the entry of new firms:
  - **The product-variety externality**: surplus consumers get from the introduction of new products
  - **The business-stealing externality**: losses incurred by existing firms when new firms enter market
- The inefficiencies of monopolistic competition are subtle and hard to measure. No easy way for policymakers to improve the market outcome.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

ACTIVE LEARNING 1

Advertising

1. So far, we have studied three market structures: perfect competition, monopoly, and monopolistic competition. In each of these, would you expect to see firms spending money to advertise their products? Why or why not?
2. Is advertising good or bad from society's viewpoint? Try to think of at least one "pro" and "con."

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Advertising

- In monopolistically competitive industries, product differentiation and markup pricing lead naturally to the use of advertising.
- In general, the more differentiated the products, the more advertising firms buy.
- Economists disagree about the social value of advertising.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

24

The Critique of Advertising

- Critics of advertising believe:
  - Society is wasting the resources it devotes to advertising.
  - Firms advertise to manipulate people's tastes.
  - Advertising impedes competition—it creates the perception that products are more differentiated than they really are, allowing higher markups.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

25

The Defense of Advertising

- Defenders of advertising believe:
  - It provides useful information to buyers.
  - Informed buyers can more easily find and exploit price differences.
  - Thus, advertising promotes competition and reduces market power.
- Results of a prominent study: **Benham (1972)**
  Eyeglasses were more expensive in states that prohibited advertising by eyeglass makers than in states that did not restrict such advertising.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

26

Advertising as a Signal of Quality

A firm's willingness to spend huge amounts on advertising may signal the quality of its product to consumers, *regardless of the content of ads.*

- Ads may convince buyers to try a product once, but the product must be of high quality for people to become repeat buyers.
- The most expensive ads are not worthwhile unless they lead to repeat buyers.
- When consumers see expensive ads, they think the product must be good if the company is willing to spend so much on advertising.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

27

Brand Names

- In many markets, brand name products coexist with generic ones.
- Firms with brand names usually spend more on advertising, charge higher prices for the products.
- As with advertising, there is disagreement about the economics of brand names…

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

28

The Critique of Brand Names

- Critics of brand names believe:
  - Brand names cause consumers to perceive differences that do not really exist.
  - Consumers' willingness to pay more for brand names is irrational, fostered by advertising.
  - Eliminating govt protection of trademarks would reduce influence of brand names, result in lower prices.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

29

The Defense of Brand Names

- Defenders of brand names believe:
  - Brand names provide information about quality to consumers.
  - Companies with brand names have incentive to maintain quality, to protect the reputation of their brand names.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

30

CONCLUSION

- Differentiated products are everywhere; examples of monopolistic competition abound.
- The theory of monopolistic competition describes many markets in the economy, yet offers little guidance to policymakers looking to improve the market's allocation of resources.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

31

SUMMARY

- A monopolistically competitive market has many firms, differentiated products, and free entry.
- Each firm in a monopolistically competitive market has excess capacity—it produces less than the quantity that minimizes *ATC.* Each firm charges a price above marginal cost.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

SUMMARY

- Monopolistic competition does not have all of the desirable welfare properties of perfect competition. There is a deadweight loss caused by the markup of price over marginal cost. Also, the number of firms (and thus varieties) can be too large or too small. There is no clear way for policymakers to improve the market outcome.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

SUMMARY

- Product differentiation and markup pricing lead to the use of advertising and brand names. Critics of advertising and brand names argue that firms use them to reduce competition and take advantage of consumer irrationality. Defenders argue that firms use them to inform consumers and to compete more vigorously on price and product quality.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

Monopolistic Competition

- Most close to reality
- Differentiated Products:
  - Location, location, location!
- SR: Like a monopoly (locally)
- LR: Zero profits
- Homework: Mankiw, Ch.16, pp. 346-348, Problem 1, 8, 9, 11, 12.

© 2012 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website for classroom use.

35