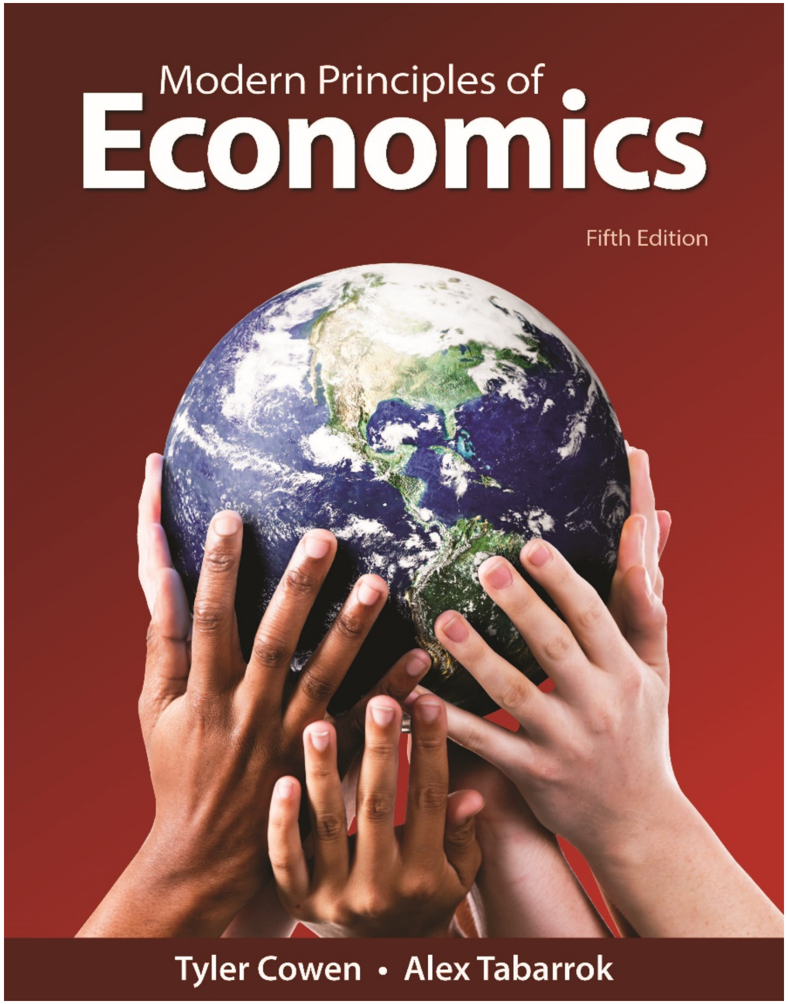
MODERN PRINCIPLES OF ECONOMICS

Fifth Edition



Chapter 14

Price Discrimination and Pricing Strategy

Outline (1 of 2)

- Price Discrimination
- Price Discrimination Is Common
- Is Price Discrimination Bad?
- Tying and Bundling
- Takeaway

Outline (2 of 2)

- The anti-AIDS drug Combivir sells for $0.50/pill in Africa and $12.50/pill in Europe.
- Demand in Africa is lower and more elastic because people, on average, are poorer.
- GlaxoSmithKline can increase its profit by selling the same product at different prices to different customers.

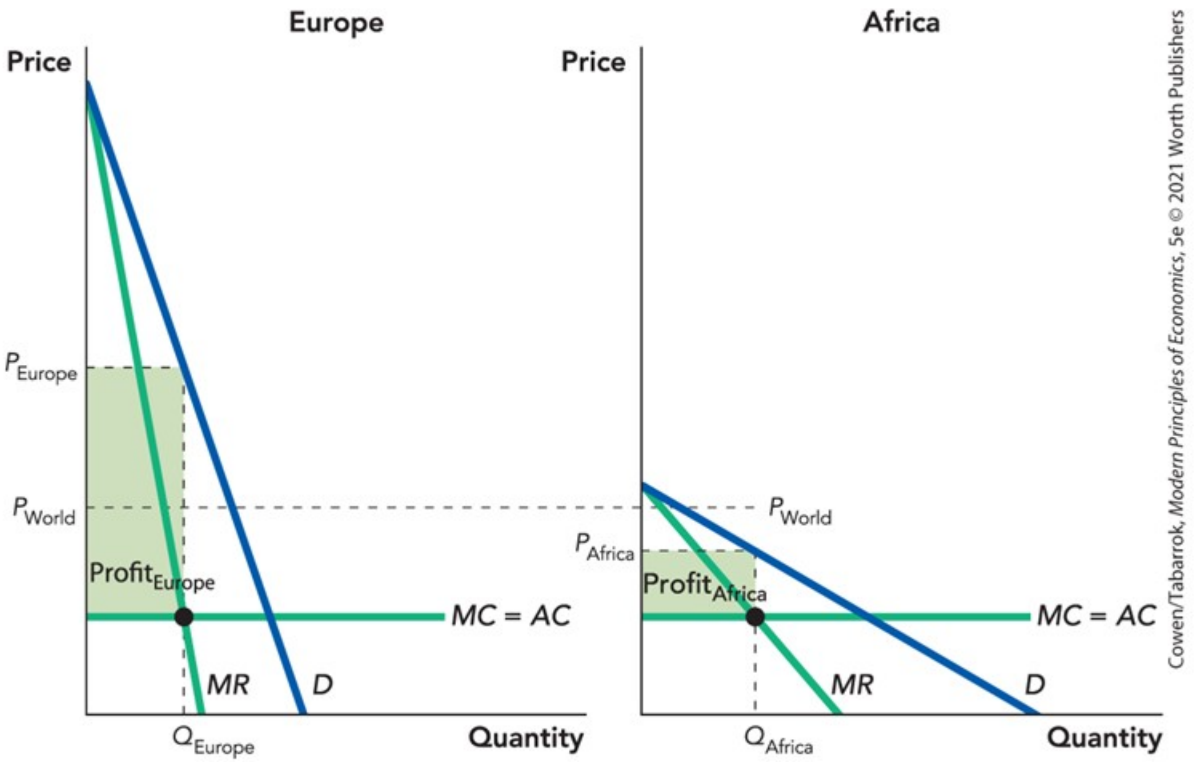
Definition (1 of 5)

Price discrimination:

Selling the same product at different prices to different customers.

Price Discrimination

EUROPE	**AFRICA**
Larger market	Smaller market
Less elastic demand	More elastic demand



Self-Check (1 of 4)

A firm with market power can use price discrimination to:

a. decrease costs.

b. decrease output.

c. increase profits.

Self-Check (1 of 4) (Answer)

A firm with market power can use price discrimination to:

a. decrease costs.

b. decrease output.

c. increase profits.

Answer:

c. A firm with market power can use price discrimination to increase profits.

Definition (2 of 5)

The principles of price discrimination:

1a. *If the demand curves are different, it is more profitable to set different prices in different markets than a single price that covers all markets.*

1b. *To maximize profit, the firm should set a higher price in markets with more inelastic demand.*

2. *Arbitrage makes it difficult for a firm to set different prices in different markets.*

Definition (3 of 5)

Arbitrage:

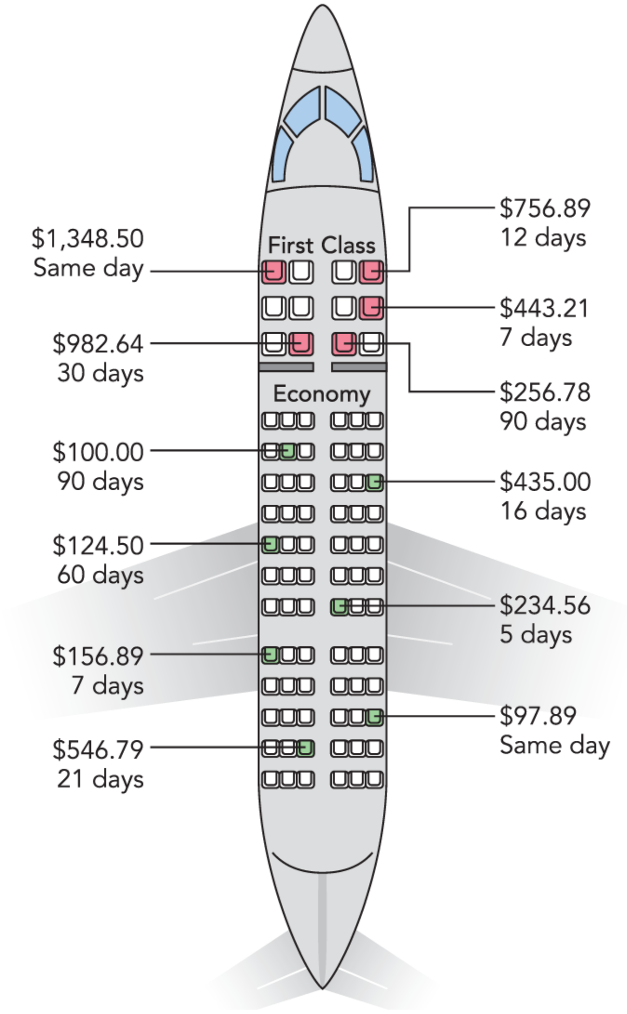
Taking advantage of price differences for the same good in different markets by buying low in one market and selling high in another market.

Preventing Arbitrage

- Rohm and Haas produced a plastic (MM) used in industry and in dentistry.
- MM for industrial uses sold at $0.85 per pound; a slightly different version for dentures sold at $22 per pound.
- To reduce arbitrage, Rohm and Haas spread a rumor that industrial MM was laced with arsenic.

Price Discrimination Is Common

- Movie theaters often charge seniors less.
- Businesses often pay more for software than students do.
- Airlines set different prices according to characteristics that are correlated with willingness to pay.



Cowen/Tabarrok, *Modern Principles of Economics, 5e* © 2021 Worth Publishers

Definition (4 of 5)

Perfect price discrimination:

Each customer is charged his or her maximum willingness to pay.

Perfect Price Discrimination (1 of 3)

Price Discrimination at Williams College, 2016

Income Quintile	Family Income	Average Net Price
Low	$0–$30,000	$3,127
Lower Middle	$30,001–$48,000	$4,971
Middle	$48,001–$75,000	$7,419
Upper Middle	$75,001–$110,000	$16,899
High	$1,100,011	$38,936

Note: Students who did not apply for financial aid—about half the student body—paid $64,090.

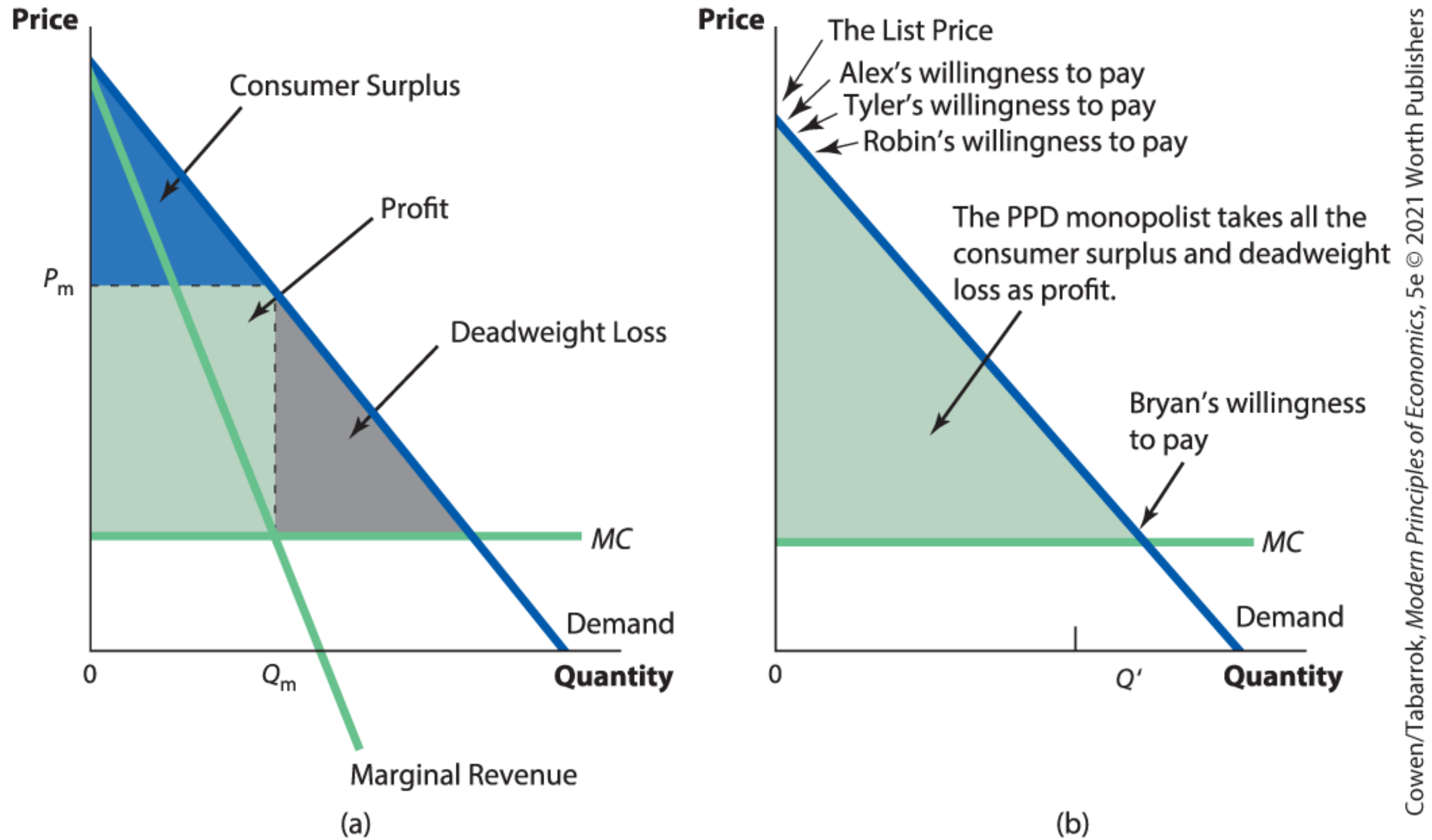
Data from: CollegeCalc.org, using data from the U.S. Department of Education.

Williams College uses detailed information about its customers to set many different prices.

Perfect Price Discrimination (2 of 3)

- A perfectly price-discriminating (PPD) monopolist charges each consumer his or her maximum willingness to pay.
- Consumers end up with zero consumer surplus.
- All of the gains from trade go to the monopolist.
- The PPD monopolist has an incentive to maximize the gains from trade, which means no deadweight loss.

Perfect Price Discrimination (3 of 3)



Self-Check (2 of 4)

Perfect price discrimination means charging each customer:

a. the same amount.

b. their maximum willingness to pay.

c. their maximum ability to pay.

Self-Check (2 of 4) (Answer)

Perfect price discrimination means charging each customer:

a. the same amount.

b. their maximum willingness to pay.

c. their maximum ability to pay.

Answer:

b. Perfect price discrimination means charging each customer their maximum willingness to pay.

Is Price Discrimination Bad? (1 of 2)

- Price discrimination could be better or worse than single pricing.
- It is bad if the total output with price discrimination falls or stays the same.
- If output increases under price discrimination, then total surplus will usually increase.

Is Price Discrimination Bad? (2 of 2)

- Price discrimination helps cover fixed costs.
- Fixed costs remain the same, while profits increase with market size.
- More profit encourages more research and development.
- This creates incentives to increase output.

Self-Check (3 of 4)

Price discrimination is better than single pricing if:

a. total surplus increases.

b. total surplus decreases.

c. output remains the same.

Self-Check (3 of 4) (Answer)

Price discrimination is better than single pricing if:

a. total surplus increases.

b. total surplus decreases.

c. output remains the same.

Answer:

a. Price discrimination is better if it increases total surplus.

Definition (5 of 5)

Tying:

To use one good, a consumer must use a second good that is sold only by the same firm.

Bundling:

Requiring that products be bought together in a bundle or package.

Tying (1 of 2)

- Hewlett-Packard sells printers below cost and ink far above cost.
- The printer will only work with HP ink cartridges.
- Those with a high willingness to pay probably want to print a lot of photos.
- Tying causes high-volume users to pay more per photo than low-volume users.

Tying (2 of 2)

- Tying illustrates the benefits and costs of price discrimination.
  - May increase output by lowering price for low-volume users
  - Spreads the fixed cost of R&D over more users, encouraging innovation
  - Extra money is spent to keep competitors out of the ink business

Bundling (1 of 3)

- Many goods must be bought as a package.
  - Toyota doesn't sell engines, steering columns, and wheels; it sells a bundle called a car.
  - It would be difficult for most consumers to assemble the parts themselves.
- Microsoft bundles Word, Excel, Outlook, Access, and PowerPoint into Microsoft Office.
  - It would not be difficult for consumers to buy the products individually and assemble them.

Bundling (2 of 3)

Maximum Willingness to Pay for Word and Excel

	Amanda	Yvonne
Word	$100	$40
Excel	$20	$90

- Consumers have very different values for the separate items but similar values for the package.
- This enables price discrimination.

Bundling (3 of 3)

Maximum Willingness to Pay for Office

	Amanda	Yvonne
Word	$100	$40
Excel	$20	$90
Office=Word + Excel	$120	$130

- Suppose Microsoft charges $120 for Office.
- Amanda pays $100 for Word and $20 for Excel.
- Yvonne pays $40 for Word and $80 for Excel.

Self-Check (4 of 4)

Requiring goods to be bought together in a single package is called:

a. tying.

b. bundling.

c. single-package pricing.

Self-Check (4 of 4) (Answer)

Requiring goods to be bought together in a single package is called:

a. tying.

b. bundling.

c. single-package pricing.

Answer:

b. Requiring goods to be bought together is called bundling.

Takeaway (1 of 2)

- Price discrimination is common.
- Firms often price goods based on characteristics correlated with willingness to pay.
  - Student and senior discounts
  - Setting prices depending on how far in advance a flight is booked
- Firms must prevent arbitrage to successfully price discriminate.

Takeaway (2 of 2)

- The more a firm knows about its customers, the better it can price discriminate.
- Perfect price discrimination means charging each customer their maximum willingness to pay.
- Tying and bundling are different forms of price discrimination.
- By increasing profits, price discrimination increases the incentive to engage in R&D.