



Understanding Economics

2nd edition

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Chapter 5

Perfect Competition

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Chapter Objectives

- In this chapter you will:
 - Consider the four market structures, and the main differences among them.
 - Learn about the profit-maximizing rule and how perfectly competitors use it in the short run.
 - Examine how perfect competitive markets adjust in the long run, and the benefits they provide to consumers.

Market Structures

- There are four main market structures
 - perfect competition
 - monopolistic competition
 - oligopoly
 - monopoly

Perfect Competition

- Perfectly competitive markets have three main features
 - many buyers and sellers
 - a standard product
 - easy entry and exit

Monopolistic Competition

- Monopolistically competitive markets have three main features
 - many buyers and sellers
 - slightly different products
 - easy entry and exit

Oligopoly and Monopoly

- In an oligopoly a few businesses (protected by entry barriers) provide standard or similar products.
- In a monopoly a single business (protected by entry barriers) provides a product with no close substitutes.

Entry Barriers

- There are six main entry barriers in oligopolies and monopolies
 - increasing returns to scale
 - market experience
 - restricted ownership of resources
 - legal obstacles (such as patents)
 - market abuses (such as predatory pricing)
 - advertising (which is most common in oligopolies)

Market Power

- Market power
 - is a business's ability to affect the price it charges
 - varies with market structure, such that monopolists have the most and perfect competitors have the least

Attributes of Market Structures

Figure 5.1, Page 120

	Perfect Competition	Monopolistic Competition	Oligopoly	Monopoly
Numbers of Businesses	very many	many	few	one
Standard Product	always	never	sometimes	not applicable
Entry and Exit of New Business	very easy	fairly easy	difficult	very difficult
Market Power	none	some	some	great
Example	farming	restaurants	automobile manufacturing	public utilities

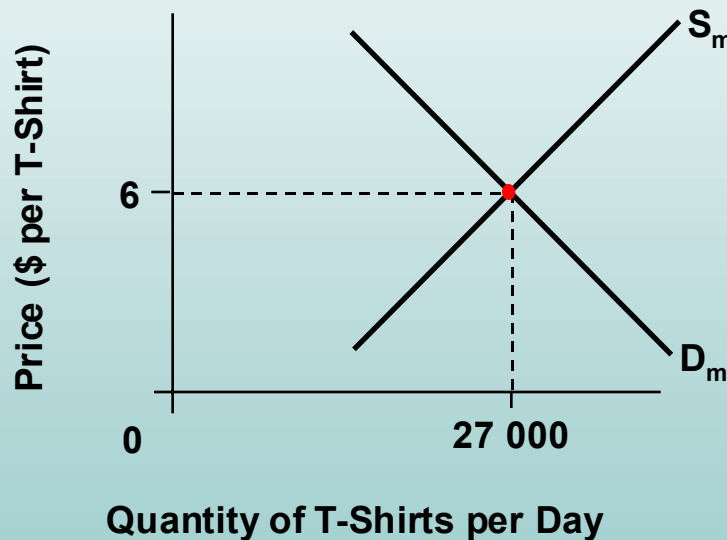
Perfect Competitor's Demand (a)

- A perfect competitor has a demand curve different from the market demand curve.
- The business's demand curve is horizontal at the prevailing market price.

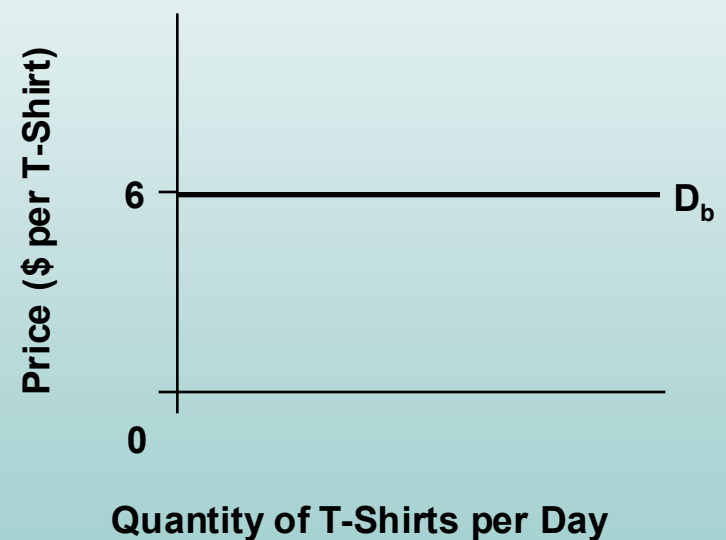
Perfect Competitor's Demand (b)

Figure 5.2, page 122

Market Demand and Supply Curves for T-Shirts



Pure 'n' Simple T-Shirts' Demand Curve



Average and Marginal Revenue

- Total revenue is used to find two other revenue concepts
 - average revenue (total revenue divided by output)
 - marginal revenue (change in total revenue divided by change in output)

Revenue Conditions for a Perfect Competitor

- Average revenue equals price, so that a perfect competitor's average revenue curve is its horizontal demand curve.
- A perfect competitor's average revenue (price) is constant so that marginal revenue and average revenue are always equal.

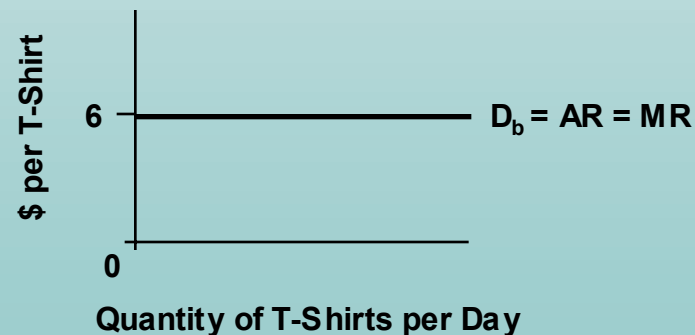
Revenues for a Perfect Competitor

Figure 5.3, page 123

Revenue Schedules for Pure 'n' Simple T-Shirts

Price (P) (\$ per T-shirt)	Quantity (q) (T-Shirts per day)	Total Revenue (TR) (P x q)	Marginal Revenue (MR) ($\Delta TR \times \Delta q$)	Average Revenue (AR) (TR x q)
--	0	0	→	
6	80	480	→ $480/80 = 6$	$480/80 = 6$
6	200	1200	→ $720/120 = 6$	$1200/200 = 6$
6	250	1500	→ $300/50 = 6$	$1500/250 = 6$
6	270	1620	→ $120/20 = 6$	$1620/270 = 6$
6	280	1680	→ $60/10 = 6$	$2680/280 = 6$

Revenue Curves for Pure 'n' Simple T-Shirts



The Profit-Maximizing Rule

- The profit-maximizing rule states that profit is maximized when marginal revenue equals marginal cost.
 - Output should be increased if marginal revenue exceeds marginal cost.
 - Output should be decreased if marginal cost exceeds marginal revenue.

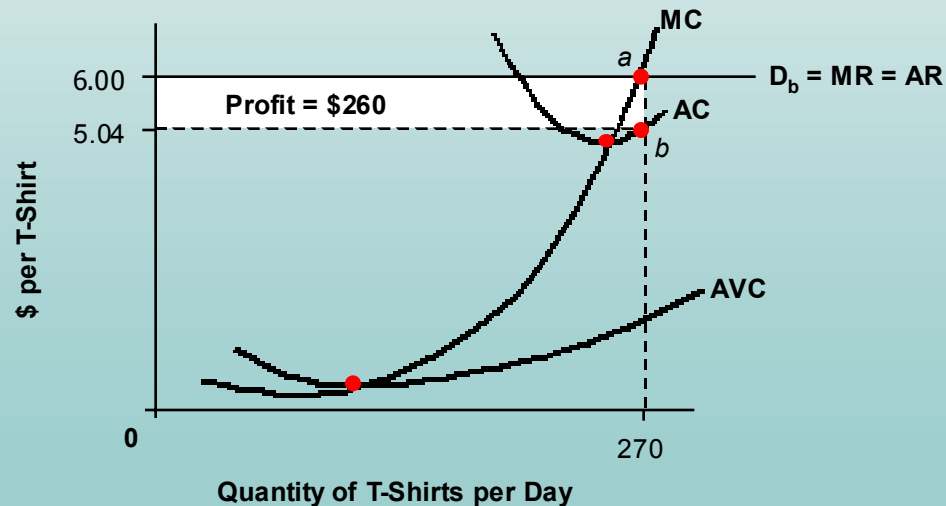
Profit Maximization for a Perfect Competitor

Figure 5.4, page 125

Profit Maximization Table for Pure 'n' Simple T-Shirts

Total Product (q)	Price (P) (=AR)	Marginal Revenue (MR)	Marginal Cost (MC) ($\Delta TC/\Delta q$)	Average Variable Cost (AVC) (VC/q)	Average Cost (AC) (TC/q)	Total Revenue (TR)	Total Cost (TC)	Total Profit (TR - TC)
0	6	6	1.75			0	825	-825
80	6	6	1.33	1.75	12.06	480	965	-485
200	6	6	2.50	1.50	5.63	1200	1125	75
250	6	6	5.50	1.70	5.00	1500	1250	250
270	6	6	10.50	1.98	5.04	1620	1360	260
280	6	6		2.29	5.24	1680	1465	215

Profit Maximization Graph for Pure 'n' Simple T-Shirts



The Breakeven and Shutdown Points

- The breakeven point is where a business breaks even while maximizing profit.
 - For a perfect competitor this occurs where price equals minimum average cost.
- The shutdown point is the lowest price at which a business will choose to operate in the short run.
 - It occurs where price equals minimum average variable cost.

A Perfect Competitor's Supply Curve

- A perfect competitor's supply curve is its marginal cost curve above the shutdown point.
- The market supply curve can be found by horizontally adding the supply curves for all the businesses in the industry.

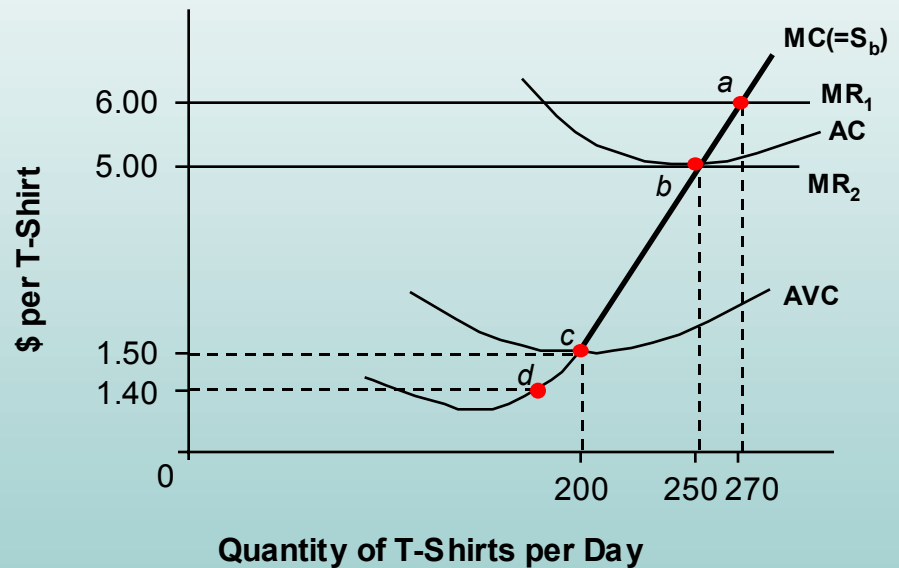
Supply Curve for a Perfect Competitor

Figure 5.5, page 127

Supply Schedule for Pure 'n' Simple T-Shirts

Price (P) (\$ per T-Shirt)	Quantity Supplied (q) (T-Shirts per day)
6.00	270
5.00	250
1.50	200
1.40	0

Supply Curve for Pure 'n' Simple T-Shirts



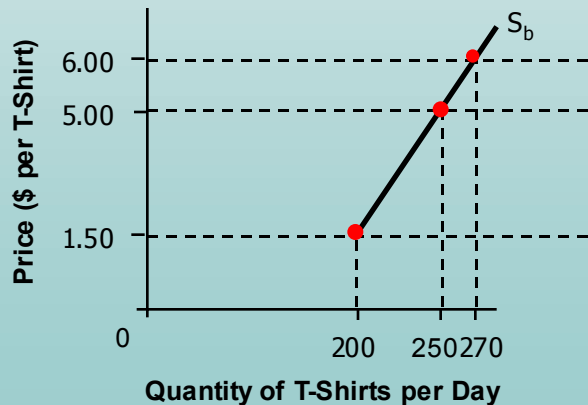
Supply Curves for a Perfectly Competitive Business and Market

Figure 5.6, page 129

Business and Market Supply Schedules for T-Shirts

Price (P) (\$ per T-Shirt)	Quantity Supplied	
	(q) (S _b)	(q) (S _m)
6.00	270	27 000
5.00	250	25 000
1.50	200	20 000

Supply Curve for Pure 'n' Simply T-Shirts



Supply Curve for T-Shirt Market



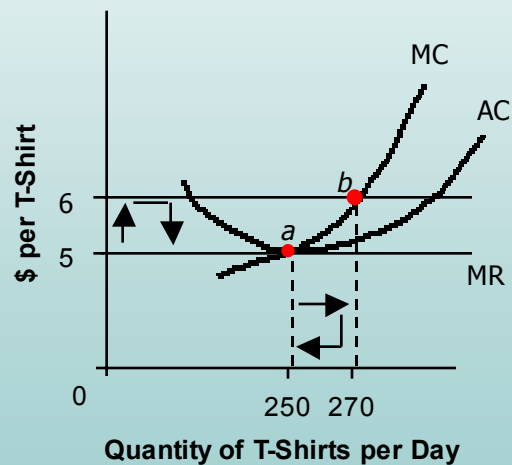
Perfect Competition in the Long Run

- Entry and exit by businesses in the long run drives a perfectly competitive market to the breakeven point
 - businesses enter markets where economic profits are made so that supply shifts right and price falls
 - businesses leave markets where economic losses are made so that supply shifts left and price rises

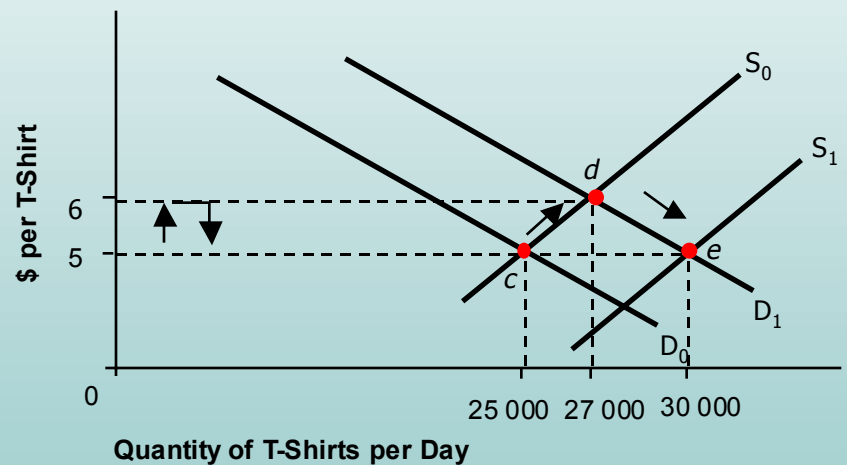
Long-Run Equilibrium for a Perfectly Competitive Business

Figure 5.7, page 130

Pure 'n' Simply T-Shirts



T-Shirt Market



The Benefits of Perfect Competition

- Perfectly competitive markets in long-run equilibrium meet two conditions that benefit consumers
 - minimum-cost pricing (price = minimum average cost)
 - marginal-cost pricing (price = marginal cost)

Prophet of Capitalism's Doom

- According to Karl Marx's theory of exploitation
 - a product's price is based on the amount of labour that goes into producing it
 - capitalists cut costs by minimizing workers' wages and by maximizing the length of the workday
 - capitalists keep any surplus value which is the excess of their revenues over their costs

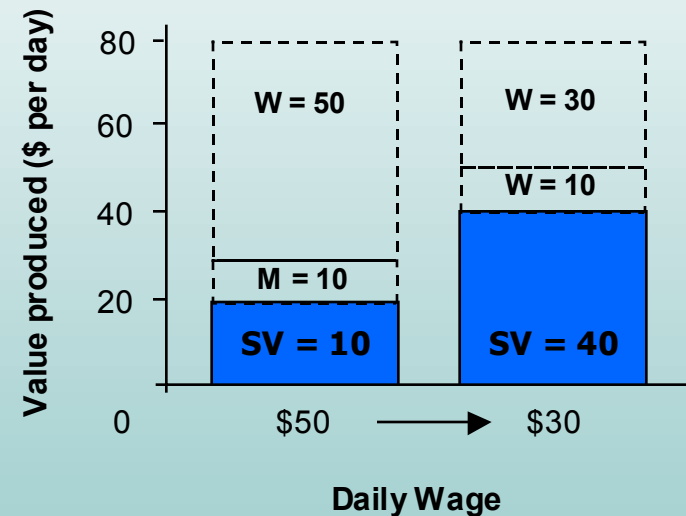
Marx's Theory of Exploitation

Figure A, Page 135

Creation of Surplus Value
(when producing 2 shirts or 1 suit)

	\$50 Wage	\$30 Wage
Daily Wage	\$50	\$30
Materials and machine wear and tear (M)	\$10	\$10
Surplus Value (SV)	<u>\$20</u>	<u>\$40</u>
Total Value	\$80	\$80
Exploitation Rate (SV/W)	$\frac{2}{5}$	$\frac{4}{3}$

Creation of Surplus Value





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Chapter 5 **The End**

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