

Perfect Competition

Econ 102: Introduction to Microeconomics

1

1.1 Goals of today's class

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- Learn different types of market structures.
- Learn how perfectly competitive firms make production decisions.
- Learn about the long-run outcome of perfectly competitive firms.

2 What is Perfect Competition

2.1 Types of Markets

Types of Markets

- **Perfect Competition (Chapter 11):** many firms producing identical products, no barriers to enter industry.
- **Monopoly (Chapter 12):** one firm with control over its price, barriers to other firms entering.
- **Monopolistic Competition (Chapter 13):** many firms with differentiated products, no barriers to entry.
- **Oligopoly (Chapter 13):** only a small number of large firms dominate the industry - one firm's actions affect the decisions of others.

2.2 Characteristics

Perfect Competition

- Characteristics of Perfect Competition:
 - Many small firms, each is very small compared to the entire market.
 - Firms all sell identical products.
 - All firms and customers are well informed about prices.

- No barriers to entering the industry.
- Very few “perfect” examples of perfect competition. Some close examples:
 - Agricultural products: wheat, soybeans, corn, etc.
 - Secondary sellers - eg: textbook stores.
 - Unskilled labor.

3 Short-run Decisions

3.1 Demand Facing Individual Firms

Demand Facing Individual Firm

- Entire market demand curve may be downward sloping.
- Conditions facing individual firm.
 - Because product is identical to many competitors → cannot charge higher prices than competitors.
 - Because firm is small → no incentive to charge lower prices than competitors.
 - Perfectly competitive firms are referred to as **price takers**.
- Price taking → $P = MR$.
- What will demand curve facing the firm look like?

3.2 Profit Maximization

Firm’s Decisions

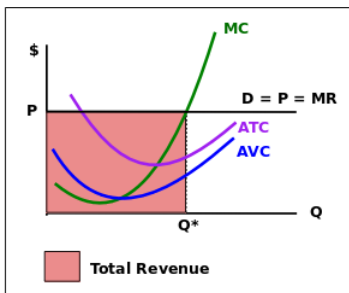
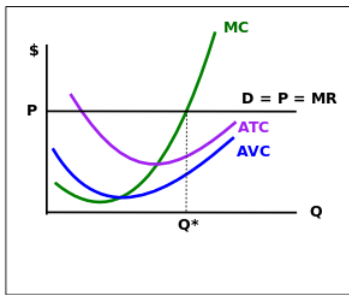
- Short-run decision: how much to produce to maximize profits.
 - Can only change variable factor of production (usually labor), all other decisions are pre-determined.
- Long-run decisions:
 - New firms can enter the industry.
 - Existing firms can leave the industry.
 - Firms can change their scale (eg: increase plant size).

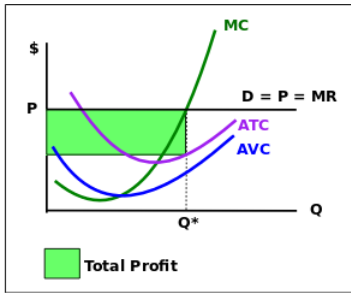
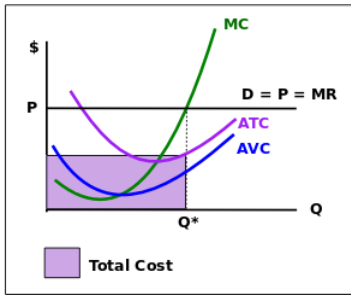
Profit Maximization

- Suppose $MR > MC$. What does this mean?
- If this is the case, should you decide to...
 - ... produce more?
 - ... produce less?
 - ... not change production decisions (already maximizing profits)?
- What impact does this have on $MR - MC$?
- What is the profit maximization rule?

Profit Maximization

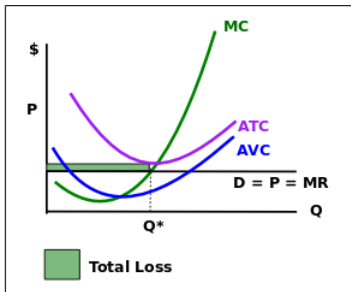
- Set $MR=MC$.
- Total Revenue = Price x Quantity
- Total Cost = ATC x Quantity
- Profit = Total Revenue - Total Cost

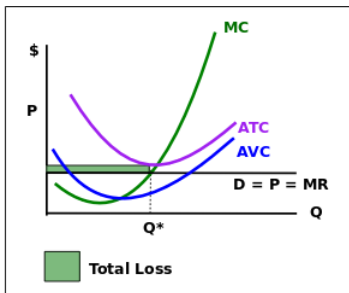
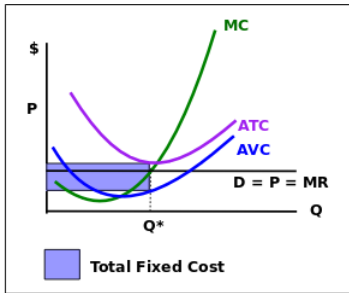




Minimizing Losses

- Sometimes the “profit maximizing” quantity ends in a loss.
- Happens when price is less than ATC.
- The loss is still less than total fixed cost = $AFC \times Q$.
- In this case it is better to produce and make a loss than shut down.

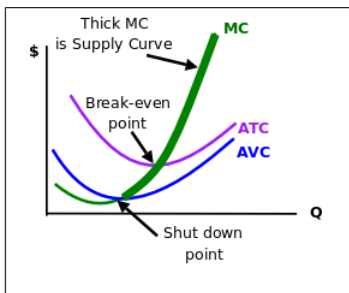




3.3 Individual Firm's Supply Curve

Individual Firm's Supply Curve

- When the price is less than minimum AVC, the loss is larger than fixed cost → Better to shut down.
- When the price is between ATC and AVC, the firm is making a loss, but loss is smaller than fixed cost.
- When the price is above the minimum ATC, firm makes profits.



4 Long-run Outcome

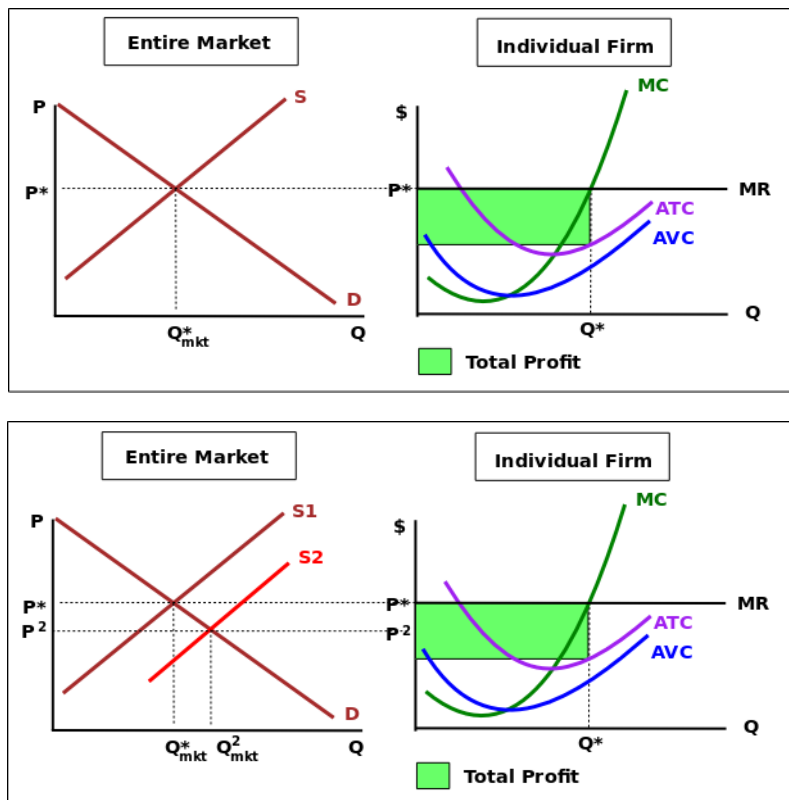
4.1 Firm Entry

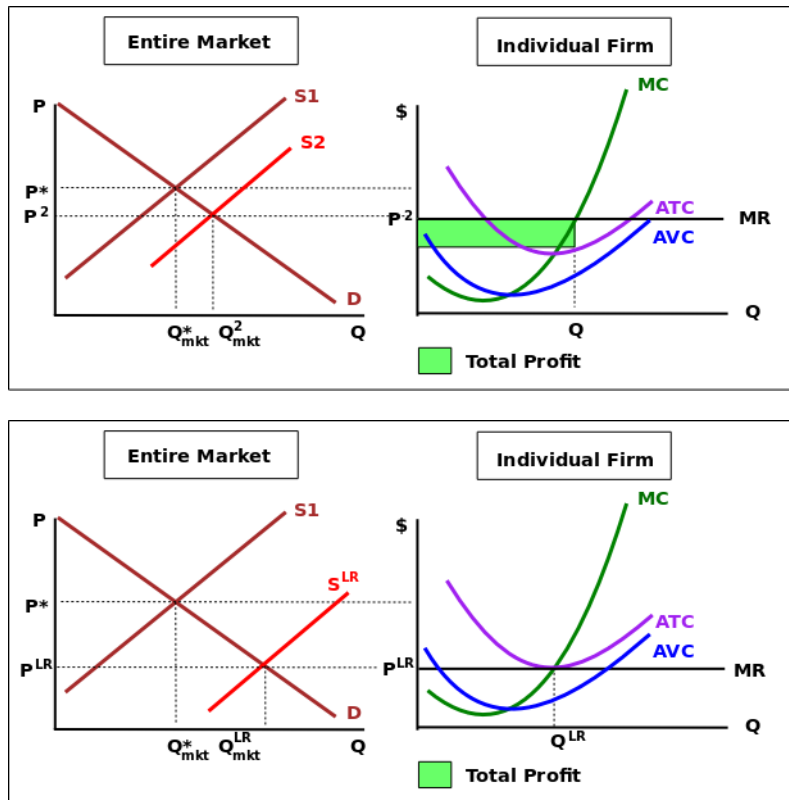
Long-run Outcome

- In the long run, firms decide to enter or exit the industry.
- Perfect competition: no barriers to entry.
- What happens over long run if firms in industry are making profits?
- What happens over long run if firms in industry are making losses?

4.2 Disappearing Profits

Long-run Disappearing Profits





- Firms are making profits.
- New firms enter industry.
- Market supply shifts left \rightarrow Price decreases.
- Price decreases \rightarrow Profits decrease.
- Process continues until profits disappear

Economic Profit

- Economic profit: Total Revenue minus Total Cost.
- Economists consider opportunity costs part of total costs.
- What is the opportunity cost of putting your money/resources into a business.
- Zero economic profit implies making a “normal” level of profit.

4.3 Long-run Efficiency

Long-run Outcome

- Free-entry caused long-run profits to drive to zero.
- In the long run, firms produce at a point where average total costs are as small as possible.
- In the long run, the amount consumers pay (price) is equal to the average total cost of producing the good.
- Long run outcome is both efficient and fair to consumers.