Conduct: Integration and Merger Activity

- Vertical Integration
  - Where various stages in the production of a single product are carried out by one firm.
- Horizontal Integration
  - The merging of the production of similar products into a single firm.
- Conglomerate Mergers
  - The integration of different product lines into a single firm.

DOJ/FTC Horizontal Merger Guidelines

- Recall HHI = 10,000 Σw_i^2, where $w_i = S_i / S_T$.
- A proposed horizontal merger may be challenged if either
  - HHI exceeds 1800, or would be after merger, and
  - Merger increases the HHI by more than 100.
- But revised guidelines recognize efficiencies:
  - "The primary benefit of mergers to the economy is their efficiency potential...which can result in lower prices to consumers...In the majority of cases the *Guidelines* will allow firms to achieve efficiencies through mergers without interference..."

Managerial Economics & Business Strategy
Chapter 8

Managing in Competitive, Monopolistic, and Monopolistically Competitive Markets

Modified by DF 10/12

Overview

I. Perfect Competition
- Characteristics and profit outlook.
- Effect of new entrants.

II. Monopolies
- Sources of monopoly power.
- Maximizing monopoly profits.
- Pros and cons.

III. Monopolistic Competition
- Profit maximization.
- Long run equilibrium.

Perfect Competition: Structure

- Many buyers and sellers.
- Homogeneous (identical) product.
- Perfect information on both sides of market.
- No transaction costs.
- Free entry and exit.

What **really** counts: each buyer and seller has insignificant influence on price.

Key Implications

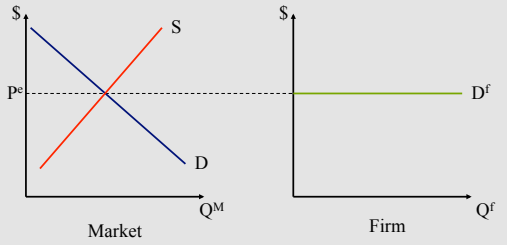
- Firms are "price takers" (P = MR).
- In the short-run, firms may earn profits or losses.
- Long-run economic profits are zero.

Unrealistic? Why Learn?

- Many small businesses are "price-takers," and decision rules for such firms are similar to those of perfectly competitive firms.
- It is a useful benchmark.
- Explains why governments oppose monopolies.
- Illuminates the "danger" to managers of competitive environments.
  - Importance of product differentiation.
  - Sustainable advantage.

Managing a Perfectly Competitive Firm (or Price-Taking Business)

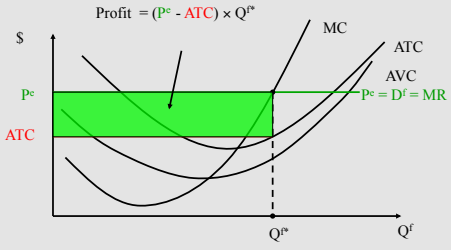
Setting Price



Profit-Maximizing Output Decision

- MR = MC.
- Since, MR = P,
- Set P = MC to maximize profits.

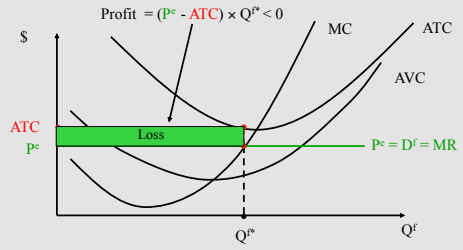
Graphically: Representative Firm's Output Decision



A Numerical Example

- Given
  - P=$10
  - $C(Q) = 5 + Q^2$
- Optimal Price?
  - P=$10
- Optimal Output?
  - MR = P = $10 and MC = 2Q
  - 10 = 2Q
  - Q = 5 units
- Maximum Profits?
  - PQ - C(Q) = (10)(5) - (5 + 25) = $20

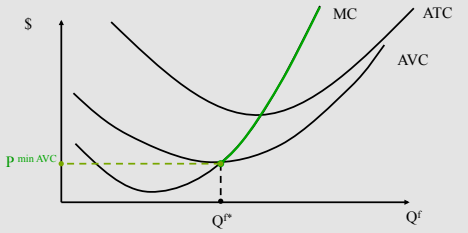
Should this Firm Sustain Short Run Losses or Shut Down?



Shutdown Decision Rule

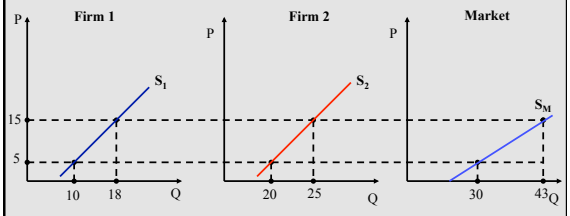
- A profit-maximizing firm should continue to operate (sustain short-run losses) if its *operating loss* is less than its *fixed costs*.
  - Operating results in a smaller loss than ceasing operations.
  - More carefully, if *OL* < *sunk FC*.
- Decision rule:
  - A firm should shutdown when P < min AVC.
  - Continue operating as long as P ≥ min AVC.

Firm's Short-Run Supply Curve: MC Above Min AVC



Short-Run Market Supply Curve

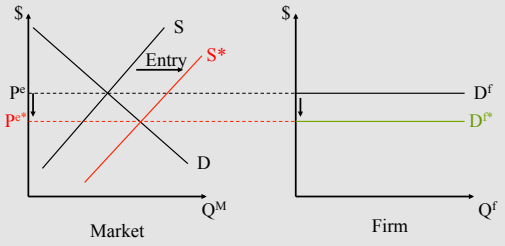
- The market supply curve is the summation of each individual firm's supply at each price.



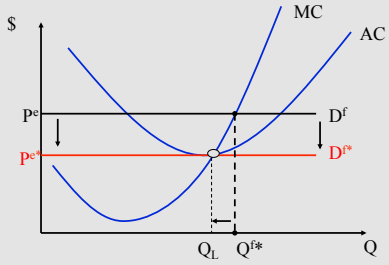
Long Run Adjustments?

- If firms are price takers but there are barriers to entry, profits will persist.
- If the industry is perfectly competitive, firms are not only price takers but there is free entry.
  - Other "greedy capitalists" enter the market.

Effect of Entry on Price?



Effect of Entry on the Firm's Output and Profits?



Summary of Logic

- Short run profits leads to entry.
- Entry increases market supply, drives down market price, increases market quantity.
- Demand for individual firm's product shifts down.
- Firm reduces output to maximize profit.
- Similarly, if SR profits are negative: exit lowers supply, drives up price, …
- Long run profits are zero.

Features of Long Run Competitive Equilibrium

- P = MC
  - Socially efficient output, in SR as well as in LR.
- P = minimum AC
  - Efficient plant size.
  - Zero profits
    - Firms are earning just enough to offset their opportunity cost.

Summary: Managing a competitive firm

Conduct:

- Take prevailing price P as given
- Chose quantity to equate MC to P.
- Look for ways to lower cost

Performance:

- zero economic profit (PS=FC), but—if it's any consolation—maximal SV=PS+CS.

Comment: firms may also try to blunt competition and escape the "commodity" trap

Monopoly: Structure

- Single firm serves the "relevant market."
- Most monopolies are "local" monopolies.
- The demand for the firm's product is the market demand curve.
- Firm has control over price.
  - Of course, the price charged affects the quantity demanded of the monopolist's product.

"Natural" Sources of Monopoly Power

- Economies of scale
- Economies of scope
- Learning curve

"Created" Sources of Monopoly Power

- Patents and other legal barriers (like licenses)
- Lock-in effects, e.g., networks
- Tying contracts
- Exclusive contracts
- Collusion

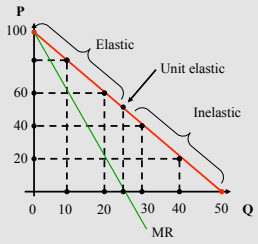
Legal Ostacles to Monopoly Power

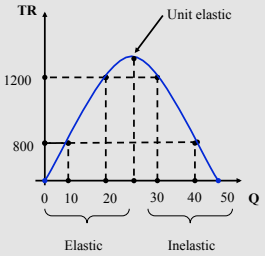
- Section 3 of the Clayton Act (1914)
  - Prohibits exclusive dealing and tying arrangements where the effect may be to "substantially lessen competition"
- Sections 1 and 2 of the Sherman Act (1890)
  - Prohibits price-fixing, market sharing, and other collusive practices designed to "monopolize, or attempt to monopolize" a market

Managing a Monopoly

- Market power permits you to price above MC
- Is the sky the limit?
- No. How much you sell depends on the price you set!

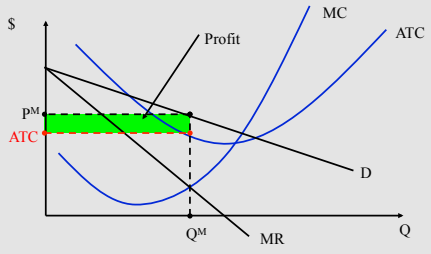
A Monopolist's Marginal Revenue





Monopoly Profit Maximization

Produce where MR = MC.
Charge the price on the demand curve that corresponds to that quantity.



Useful Formulae

- What's the MR if a firm faces a linear demand curve for its product? $P = a + bQ$

  $MR = a + 2bQ, where\ b < 0.$

- More generally, MR is the derivative of R=QP(Q)
- In terms of own-price elasticity E,

$$MR = P\left[\frac{1+E}{E}\right]$$

$$\frac{dR}{dQ} = \frac{d(QP)}{dQ} = P + Q\frac{dP}{dQ} = P[1 + \frac{Q}{P}\frac{dP}{dQ}]$$

$$= P[1 + \frac{1}{\varepsilon}]$$

because (own price) elasticity (of demand) is

$$\varepsilon = \frac{dQ}{dP}\frac{P}{Q}$$

A Linear Example

- Given estimates of
  - P = 10 - Q
  - C(Q) = 6 + 2Q
- Optimal output?
  - MR = 10 - 2Q
  - MC = 2
  - 10 - 2Q = 2
  - Q = 4 units
- Optimal price?
  - P = 10 - (4) = $6
- Maximum profits?
  - PQ - C(Q) = (6)(4) - (6 + 8) = $10