

## PURE COMPETITION

- I. FOUR MARKET MODELS:
  - a. PURE COMPETITION: Large number of firms producing standardized product; easy exit and entry; example: cotton or cucumbers
  - b. MONOPOLISTIC COMPETITION: large number of sellers producing differentiated products; widespread non-price competition (differentiating product based on product attributes or consumer perception); relatively easy entry and exit; examples- clothing, furniture, books
  - c. OLIGOPOLY – few sellers of standardized or differentiated product; each firm is affected by decisions of others- needs to use decisions for output and price; examples- car companies, cartels
  - d. MONOPOLY – one firm is sole seller; no good substitute; entry is blocked; product differentiation not issue; example – gas supplier or medical device supplier
- II. PURE COMPETITION- CHARACTERISTICS AND OCCURRENCE
  - i. VERY LARGE NUMBERS OF SELLERS
  - ii. STANDARDIZED PRODUCTS
    1. Make no attempt to differentiate products
  - iii. PRICE “TAKERS” – it cannot change the price, only adapt to it
  - iv. FREE ENTRY AND EXIT
- III. DEMAND AS SEEN BY A PURELY COMPETITIVE SELLER

- a. Because each purely competitive firm offers only a small fraction of total industry output (supply), it must accept predetermined price in the market.
- b. PERFECTLY ELASTIC DEMAND
  - i. Demand schedule faced by INDIVIDUAL FIRM is perfectly elastic: at any quantity, price stays the same
  - ii. Review figure 7.1 on page 158.
  - iii. Total Revenue (TR) =  $P \times Q$
  - iv. Average Revenue (AR) and price are the same (\$131)
  - v. Marginal Revenue (MR) is the change in Total Revenue
  - vi. IN PURE COMPETITION MR ALWAYS EQUALS PRICE
- c. PROFIT MAXIMIZATION IN THE SHORT-RUN
  - i. Because firm is a price-taker it can maximize profit only by adjusting output.
  - ii. Firm should produce any additional output whose MR exceeds its MC because firm would receive more net revenue.
  - iii. IN SHORT RUN FIRM WILL MAXIMIZE PROFIT WHERE  $MC=MR$ 
    1. As long as firm is not dealing with the shut-down decision.
    2. Also applies to firms of monopolistic competition, oligopoly and monopoly.
    3.  $P=MC$  when applied to purely competitive firm.
  - iv. WHEN PRODUCING IS PREFERABLE TO SHUTTING DOWN, THE

COMPETITIVE FIRM THAT WANTS TO MAXIMIZE ITS PROFIT OR MINIMIZE ITS LOSS SHOULD PRODUCE WHERE PRICE EQUALS MARGINAL COST ( $P=MC$ )

d. LOSS MINIMIZATION AND SHUTDOWN

- i. Review figure 7.3 on page 163
- ii. Firms produce where the revenue can cover the AVC the firm should produce even though it is losing money (\$81). It is cutting into the firm's fixed cost in the short-run
- iii. Firms should shut down if the revenue is LOWER than the AVC (\$71).

IV. MARGINAL COST AND SHORT-RUN SUPPLY

- a. Economic profit is higher at higher prices
- b. GENERAL DEPICTION: Figure 7.5 on page 167:  $MC=MR$  rule
  - i.  $P_1$ , firms won't operate at all; quantities supplied = 0
  - ii.  $P_2$ ,  $P =$  minimum AVC; will supply  $Q_2$  output to cover variable costs
  - iii.  $P_3$ , firm will supply  $Q_3$  to minimize short-run losses
  - iv. Break even at price  $P_4$ ; will supply  $Q_4$  output; earning normal profit, but no economic profit
  - v.  $P_5$  will realize economic profit; will supply  $Q_5$
  - vi. ON FIGURE 7.5, FIRM'S MC CURVE LYING ABOVE ITS AVC CURVE IS ITS SHORT-RUN SUPPLY CURVE. WHY? Won't produce below.

- c. FIRM AND INDUSTRY: EQUILIBRIUM PRICE
  - i. Market Price and Profit: Table 7.2; 8 units each for TQS 8,000 and TQD 8,000
  - ii. Review paragraph 1 on page 167; get to \$138 economic profit
  - iii. Firm vs. Industry; figure 7.6 on page 168 shows the supply and demand for individual firm versus industry.
- d. PROFIT MAXIMIZATION IN THE LONG RUN
  - i. ASSUMPTIONS:
    - 1. Entry and exit only: the only long-run adjustment
    - 2. All firms have identical cost curves
    - 3. The industry is a constant cost industry; the entry or exit of firms does not affect resource prices or the locations of the ATC curves
  - ii. GOAL OF THE ANALYSIS
    - 1. After all long-run adjustments the product price will be equal to, and production will occur at, the minimum average total cost (ATC)
    - 2. Firms seek profits and shun losses.
    - 3. Industry expansion will occur until  $P = \text{lowest ATC}$ ; same with contraction.
    - 4. Review the graphs on page 169.
    - 5. Entry eliminates economic profits
    - 6. Exit eliminates losses
    - 7. Price will include all explicit and implicit costs (normal profit)
  - iii. LONG-RUN SUPPLY FOR A CONSTANT-COST INDUSTRY

1. The long-run supply curve of a constant-cost industry is perfectly elastic: Figure 7.9a on page 172
  2. The straight line is perfectly horizontal which means perfectly elastic
- iv. LONG-RUN SUPPLY FOR AN INCREASING COST INDUSTRY
1. Most industries; constant is the exception.
  2. ATC shifts upward as industry expands and downward as industry contracts.
  3. An increase in product demand results in economic profits and attracts new firms: two way squeeze
    - a. Increases market supply
    - b. Lowers the market price
    - c. Result is a higher than original equilibrium price
    - d. Review figure 7.9b on page 172
- v. LONG-RUN SUPPLY FOR A DECREASING-COST INDUSTRY
1. Firms experience lower costs as their industry expands; example: microchips, flat-screen TVs
  2. Achieve substantial economies of scale
  3. Long-run supply curve is downsloping
- V. PURE COMPETITION AND EFFICIENCY
- a. Figure 7.10 on page 175;  $P$  (and  $MR$ ) = minimum ATC

- i. MC curve intersects the ATC curve at its minimum point
  - ii. MC, ATC, P, MR are all the same and it is a perfectly elastic MR (Price) curve
  - iii. The graph on 7.10 shows that in the short-run a firm might realize economic profit or loss, but in the long-run it will only earn a normal profit where  $MC=MR(P)=\text{minimum ATC}$
  - iv. Economists agree that purely competitive market leads to an efficient use of society's scarce resources.
- b. PRODUCTIVE EFFICIENCY:  $P = \text{MINIMUM ATC}$
- i. In the long-run, pure competition forces firms to produce at the minimum ATC of production and charge a price that is consistent with that cost.....or
  - ii. Minimum amount of resources will be used to produce any particular product
  - iii. Consumer benefit by paying the lowest product price available under current technology and cost conditions.
- c. ALLOCATIVE EFFICIENCY:  $P=MC$
- i. Money price of any product is society's measure of the relative worth of an additional unit of that product: marginal benefit
  - ii. Marginal cost of an additional unit measures the value or relative worth of other goods sacrificed for that good
  - iii. In pure competition, when profit-motivated firms produce each good or service to where  $P(\text{marginal}$

benefit)=MC, society's resources are being allocated efficiently.

- iv. A change in consumer tastes, resource supplies, or technology will automatically set in motion the appropriate realignment of resources
- v. Highly efficient allocation of resources in a purely competitive market will allow resource suppliers to further their self-interest (invisible hand of marketplace)