

## PERFECT COMPETITION

Benchmark Market System

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## PERFECT COMPETITION

- Assumptions of the model:

- 1) There exist many sellers and buyers in the market
- 2) Identical (Homogeneous) product being sold
- 3) Freedom of entry/exit by firms
- 4) Perfect information for all involved in the market
- 5) Each firm has a very small market share

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- This leads to the following characteristics of the market:

- 1) the firms are price takers; that is, each firm cannot individually affect market price
- 2) products are perfect substitutes - demand is perfectly elastic
- 3) Price is uniform across suppliers

This leads us to conclude that, in perfect competition,

$$MR = AR = P$$

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**PRODUCE OR NOT TO PRODUCE?**

- Recall, the firm in the Short Run has two questions to answer:  
1) Produce or Shut-down?  
2) If produce, how much should we produce?

Recall economic profit = TR - TC

Profits depend upon market price - 4 scenarios

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**Produce or Not to Produce**

- Case I - - **P > AC**

Profit/unit = (P-AC)      Total Profit = (P-AC)Q

So, if (P-AC) > 0, firm will earn positive economic profit

How much does it produce? Where MR=MC

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**Produce or Not to Produce**

- Case II - - **P = min AC**

Profit/unit = (P-AC)      Total Profit = (P-AC)Q

Economic Profit = 0 =====>> Firm earns normal profit

How much does it produce? Where MR=MC

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**Produce or Not to Produce?**

CASE III - -  $P < \text{minimum AC}$  but  $P > \text{minimum AVC}$

$(P-AC) < 0 \implies$  Economic Loss

Should the firm shutdown? NO.

Firms can cover variable costs, so would lose more by shutting Down than they are by producing

Profit maximization ( $MR=MC$ ) also minimizes losses

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**Produce or Not to Produce?**

- CASE 4  $P \leq \text{minimum of AVC}$

Economic Loss - should we shutdown?

If Economic Loss = Fixed Cost , continue to produce with losses equal to fixed cost

If Economic Loss > Fixed Cost, SHUTDOWN

SHUTDOWN POINT The output/ price where firms are just able to cover its variable costs. At a lower price, it cannot cover variable cost and should shutdown

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**SR Supply Curve**

- Using what we have just done, can we explain why the supply curve is upward sloping

**SR industry supply curve** - the quantity supplied by the industry at a given price - Horizontal sum of all individual firms

Price is still determined by Supply and Demand, but now we know more about why firms will produce/not produce at that level

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**LONG-RUN SUPPLY**

- Long-run signals by firm:
  - 1) If positive economic profit exists, firms will enter the market.
  - 2) If economic losses exist, firms will leave the market.
  - 3) If normal profits for the firms exist, no motivation to either enter or leave the market.

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**Firm Entry/Exit**

- **FIRM ENTRY** - As firms enter the market, market supply rises, and the economic profit of the firms drops
- **FIRM EXIT** - As firms leave the market, market supply falls, and the economic profit of the firms that remains increases (economic loss decreases)

**Summary** In Long Run, entry and exit of firms yields an equilibrium where the firms earn **NORMAL PROFIT** (economic profit = 0)

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**LR Industry Supply Curve**

- Relationship between quantity supplied and price when the industry is in LR competitive equilibrium.

3 Possible scenarios:

- 1) Constant cost industry
- 2) Increasing cost industry (External diseconomies)
- 3) Decreasing cost industry (External economies)

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