12 - Perfect Competition

- Explain why firms enter and leave a competitive market and the consequences of entry and exit
- Predict the effects of a change in demand and of a technological advance
- Explain why perfect competition is efficient

What Is Perfect Competition?

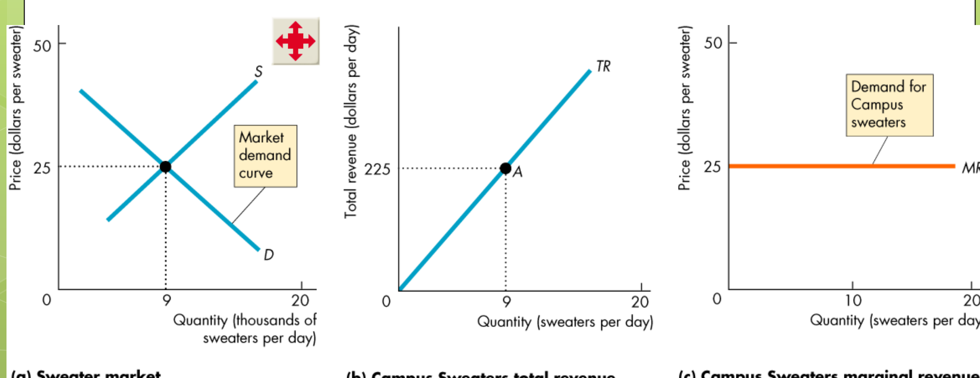
- Many firms; identical products; many buyers.
- No Restrictions to entry.
- Established firms have no advantages over new ones.
- Sellers and buyers are well informed about prices.

What Is Perfect Competition?

- How Perfect Competition Arises
  - When firm's minimum efficient scale is small relative to market demand
    - Room for many firms in the industry.
  - good or service - *perfect substitutes*
  - Each firm is a price taker

What Is Perfect Competition?

- Part (c)- Marginal Revenue = Change in TR/ Change in Q = ?
- - People's demand for the sweater at price 25 from campus shop -

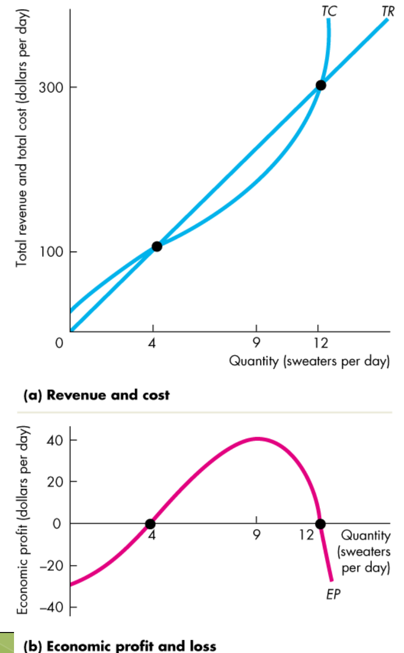


The Firm's Output Decision-Maximize Profit

- *Total Revenue - TR*
- *Total Cost - TC*.
- Economic Profit =

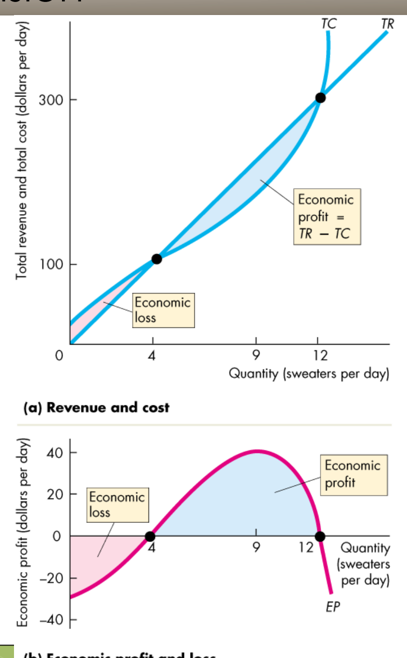
Total revenue - Total Cost

- Economic profit (or loss) curve *EP* in part (b).



The Firm's Output Decision

- *Total Revenue - TR*
- *Total Cost - TC*.
- Economic Profit = Total revenue - Total Cost
- At low output levels, the firm incurs an economic loss—it can't cover its fixed costs.

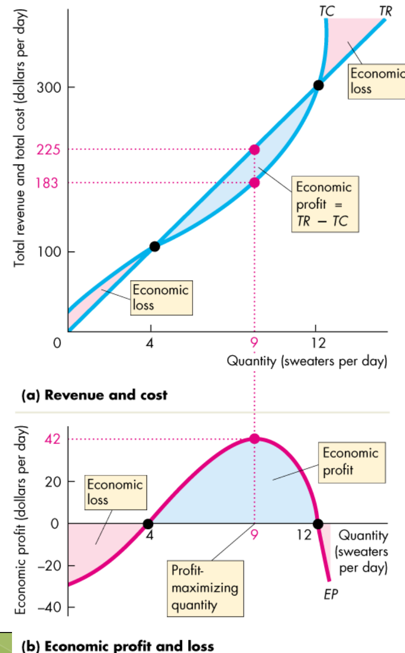


The Firm's Output Decision

- high output levels- economic loss—rising costs because of diminishing returns.

Maximum Profit

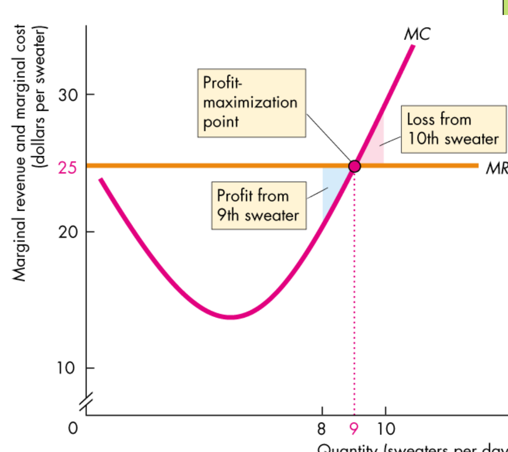
--9 sweaters a day.



The Firm's Output Decision

If $MR < MC$, economic profit decreases if output increases.

If $MR = MC$, economic profit decreases if output changes in either direction, so economic profit is maximized.



The Firm's Output Decision

The Firm's Supply Curve

- How does output vary with prices.
  - the firm's supply is linked to its marginal cost curve.

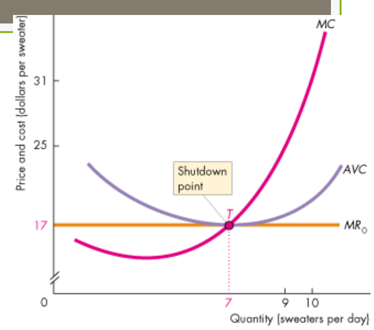
firm produces the output at which

- marginal revenue = marginal cost

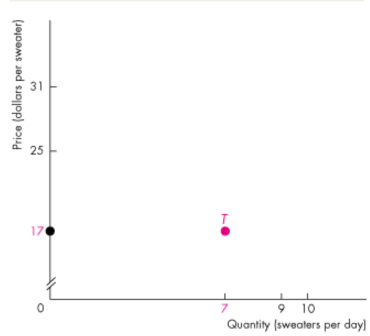
Note: marginal revenue = price

The Firm's Decision

- If price equals minimum *AVC*, $17
- the firm is indifferent between
  - producing nothing (0)
  - and producing at the shutdown point, *T*.



(a) Marginal cost and average variable cost



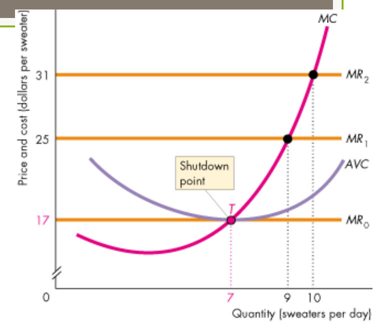
(b) Campus Sweaters short-run supply curve

The Firm's Decisions

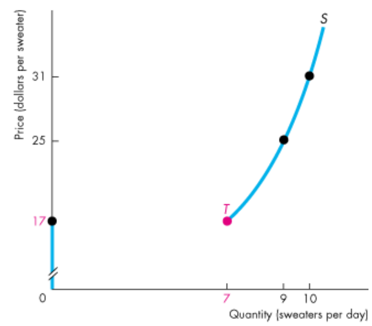
P = *MC*.

- If P=$25,
  Firm produces 9 sweaters

- If P is $31; Q=10.



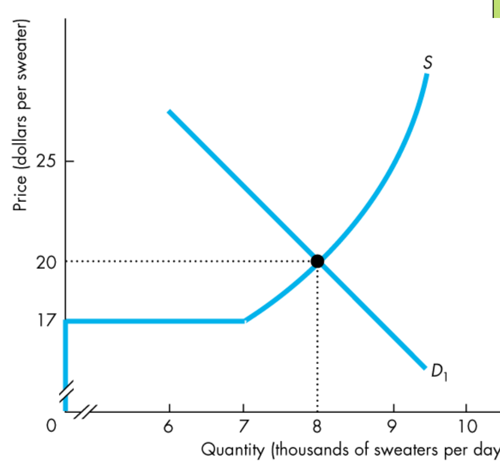
(a) Marginal cost and average variable cost



(b) Campus Sweaters short-run supply curve

Output, Price, and Profit in the Short Run

Short-run market supply and market demand determine the market price and output.



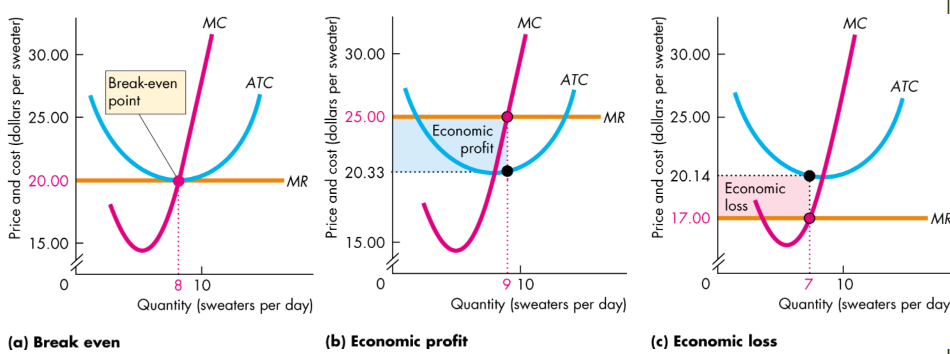
(a) Equilibrium

Profit in the Short Run

- Maximum profit is not always a positive economic profit.
- Economic Profit- firm's average total cost at the profit-maximizing output with the market price.
- Figure 12.8 on the next slide shows the three possible profit outcomes.

Profit in the Short Run

- In part (c) price is *less than* average total cost and the firm incurs an economic loss—economic profit is negative.



The Firm's Output Decision

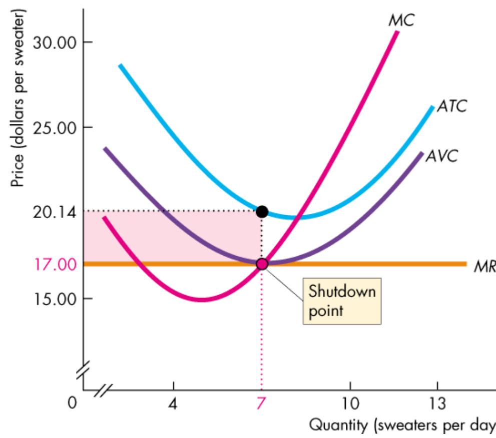
- **Loss Comparison**
- Economic loss = *TFC* + *TVC* - *TR*
- = *TFC* + (*AVC* - *P*) × *Q*
- If the firm shuts down, *Q* is 0 and the firm still has to pay its *TFC*.
- So the firm incurs an economic loss equal to *TFC*.
- This economic loss is the largest that the firm must bear.

The Firm's Output Decision

- Temporary Shutdown Decision
  - economic loss - decide to exit the market or to stay in the market.
  - stay in the market- decide whether to produce something or to shut down temporarily.
  - The firm incurs a loss equal to *TFC* from either action.
  - Shutdown point- *AVC* is at its minimum.

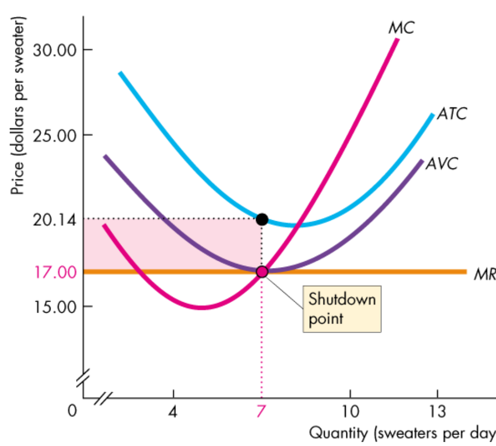
The Firm's Output Decision

- Minimum AVC is $17 a sweater.
- 7*3.14
- The firm incurs a loss equal to *TFC*.



The Firm's Output Decision

- If the price of a sweater is between $17 and $20.14,
- the firm produces the quantity at which marginal cost equals price.
- The firm covers all its variable cost and at least part of its fixed cost.
- It incurs a loss that is less than *TFC*.



Output, Price, and Profit in the Long Run

- In short-run equilibrium, a firm may make an economic profit, break even, or incur an economic loss.
- Only one of them is a long-run equilibrium because firms can enter or exit the market.

Perfect Competition

Entry and Exit

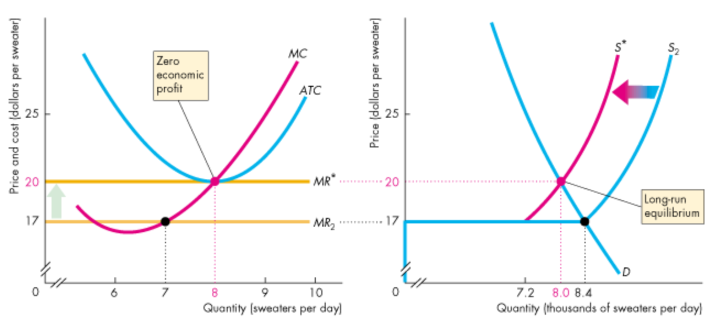
Efficiency

Output, Price, and Profit in the Long Run

- Entry and Exit
  - New firms enter an industry in which existing firms make an economic profit.
  - Firms exit an industry in which they incur an economic loss.
  - Figure 12.9 shows the effects of entry and exit.

Output, Price, and Profit in the Long Run

- Firms exit as long as firms are incurring economic losses.
- In the long run, the market supply decreases, the market price rises until firms make zero economic profit.



(a) Campus Sweaters

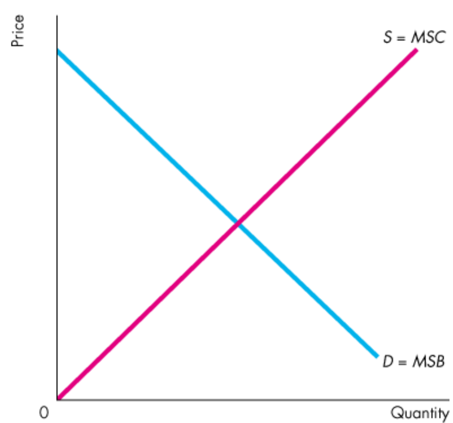
(b) The sweater market

Competition and Efficiency

- **Equilibrium and Efficiency**
- In competitive equilibrium, resources are used efficiently—the quantity demanded equals the quantity supplied, so marginal social benefit equals marginal social cost.
- The gains from trade for consumers is measured by consumer surplus.
- The gains from trade for producers is measured by producer surplus.
- Total gains from trade equal total surplus.
  In long-run equilibrium total surplus is maximized.

Competition and Efficiency

- Figure 12.12(b) shows the market.
- Along the market demand curve *D* = *MSB,* consumers are efficient.
- Along the market supply curve *S* = *MSC,* producers are efficient.



(b) A market