Economic Analysis of Technological Processes

Lecture 4
Firm Supply- Industry supply

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Lecture 4: Firm Supply

Firm decisions: quantity and őrice

Constraints:

      technological

      economic

      market and its demand curve

market environment

Lecture 4: Firm supply

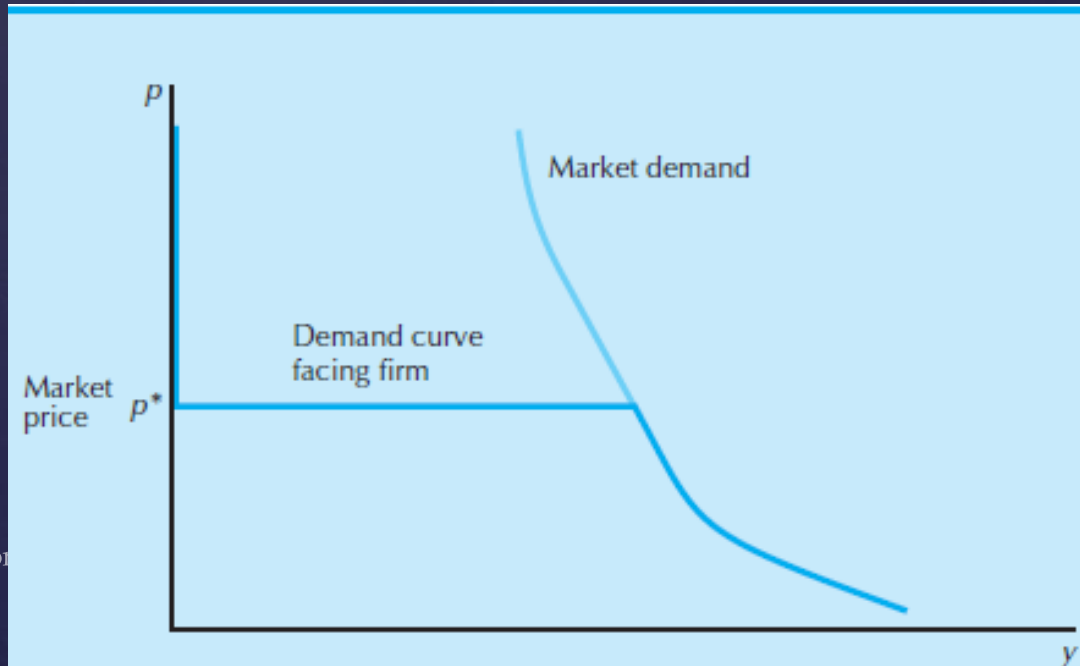## Pure Competition

independent price set

Market assumptions:
many firms
one identical product
each firm is a small part of the market
firm is price taker

Market demand curve
-demand curve
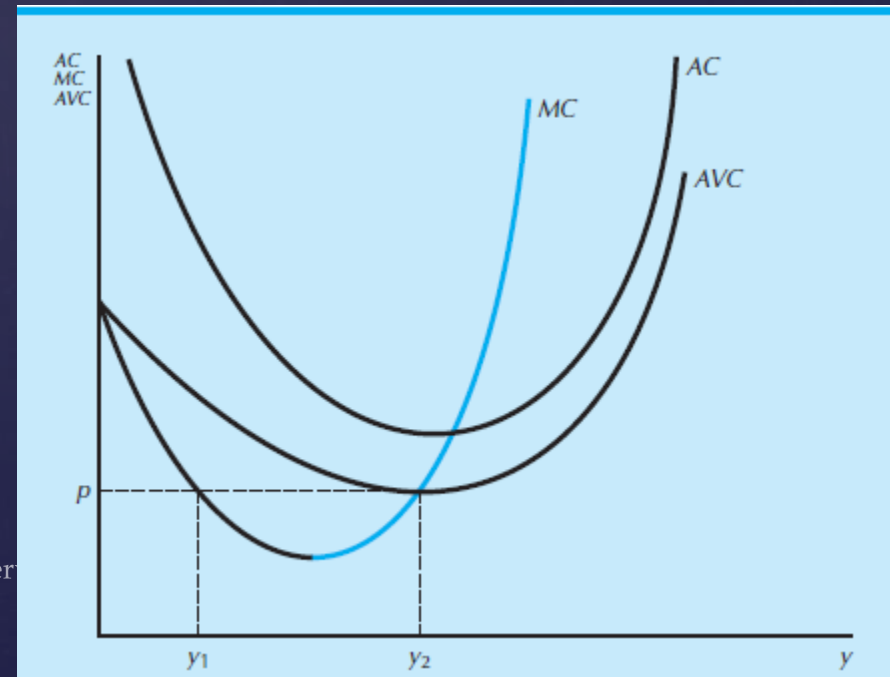facing a firm

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Supply Decision

$$\text{Max } py - c(y)$$
$$y$$

Decision point

$$\Delta R = p\Delta y \qquad \Delta R/\Delta y = p$$

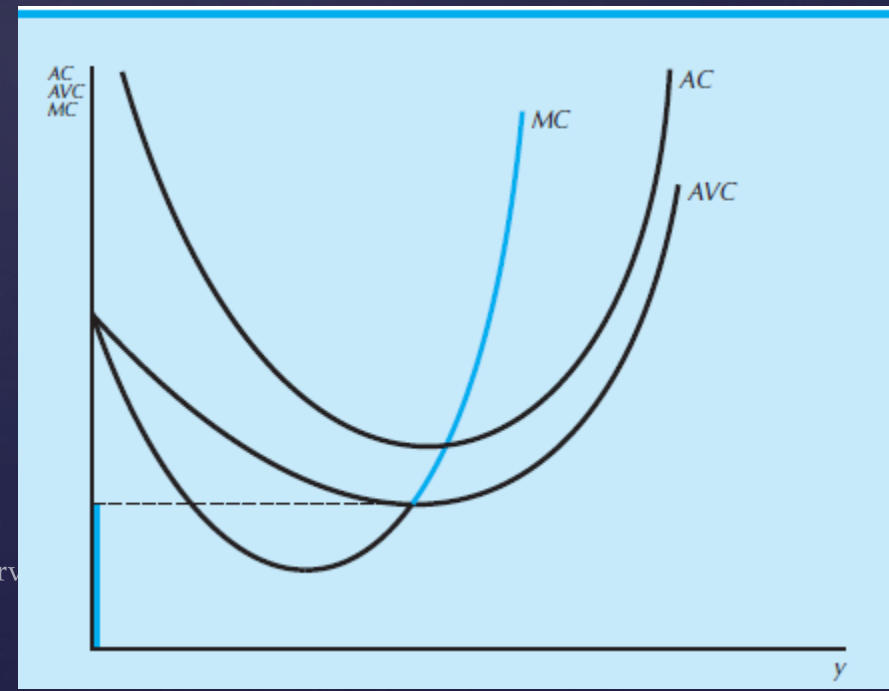$$p = MC(y) \qquad p - \Delta c/\Delta y > 0$$

Necessary but not sufficient

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Exception
shutdown condition

$-F > py - cv(y) - F$

$AV\, C(y) = cv(y)/y > p$

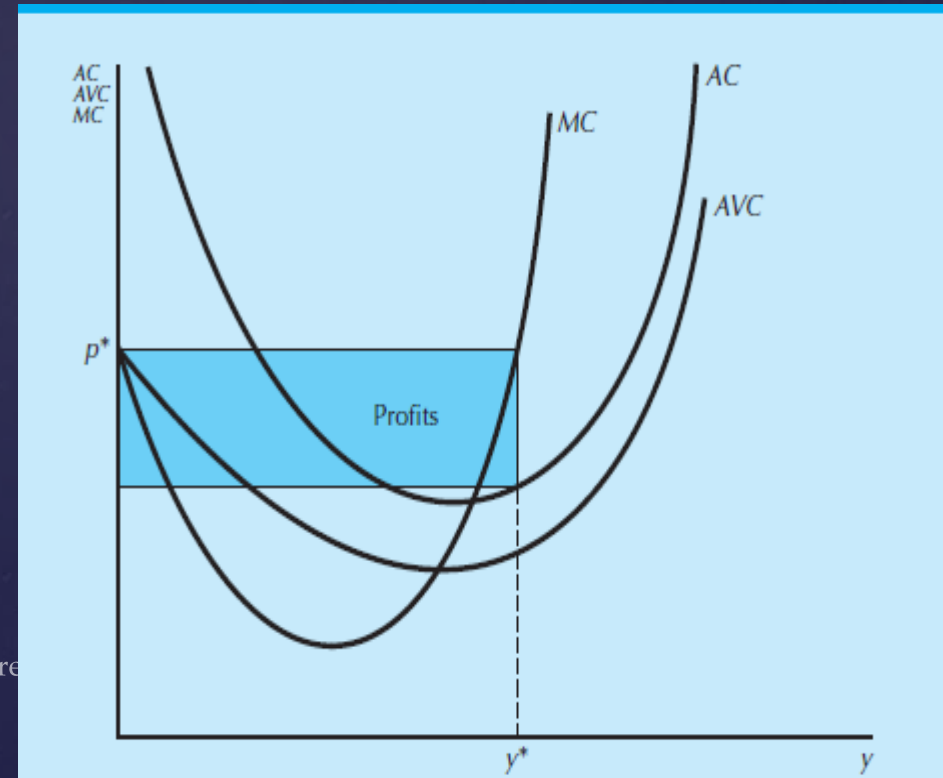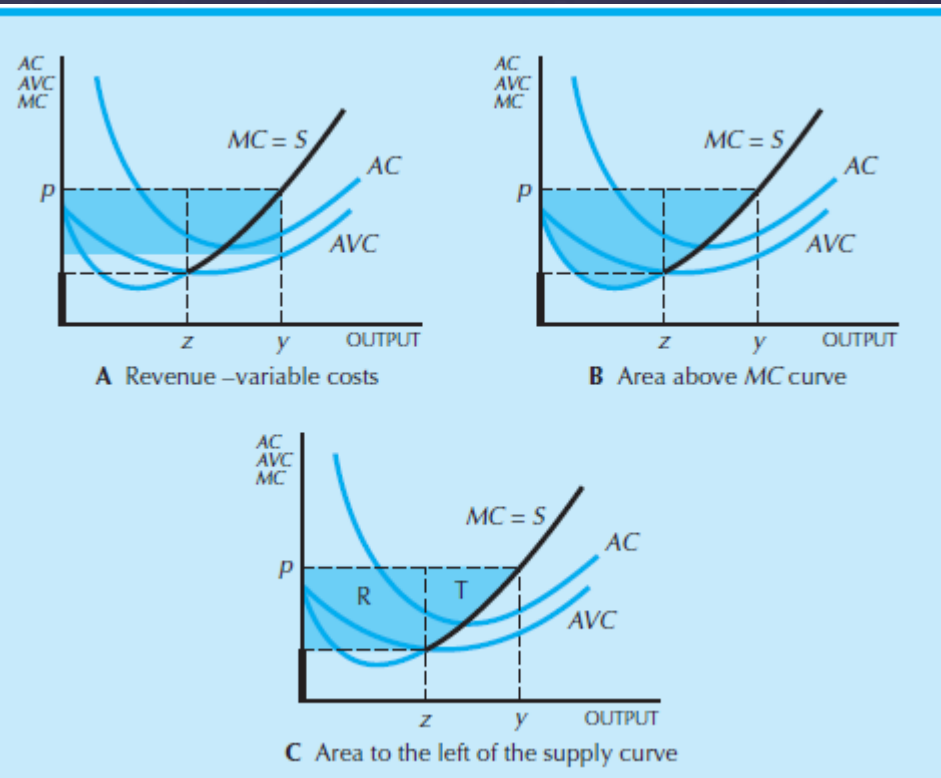**Inverse supply function**
$p = MC(y)$

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Total cost:

$$yAC(y) = y*c(y)/y = c(y)$$

producer's surplus:

profits $= py - cv(y) - F$ 　　　　　　　producer's surplus $= py - cv(y)$

A Revenue –variable costs

B Area above *MC* curve

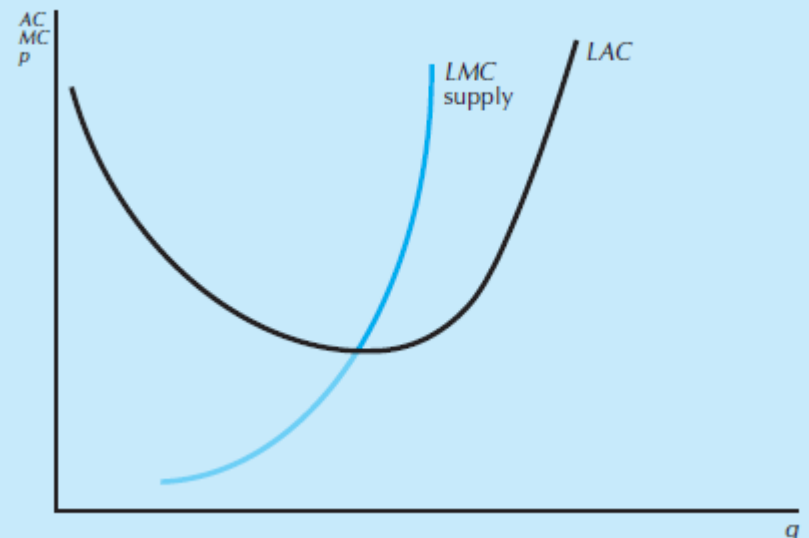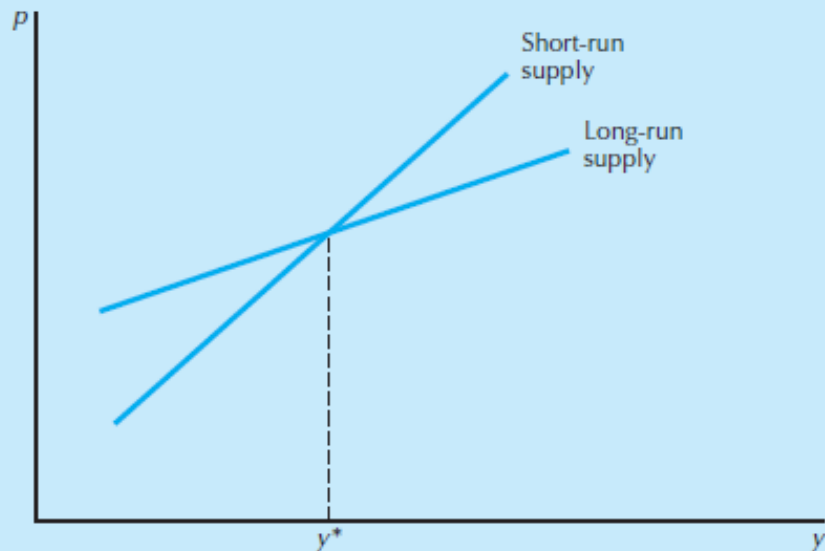C Area to the left of the supply curve

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The Long-Run Supply Curve

$$p = MCl(y) = MC(y, k(y))$$

$$py - c(y) \geq 0 \qquad\qquad p \geq c(y)/y$$
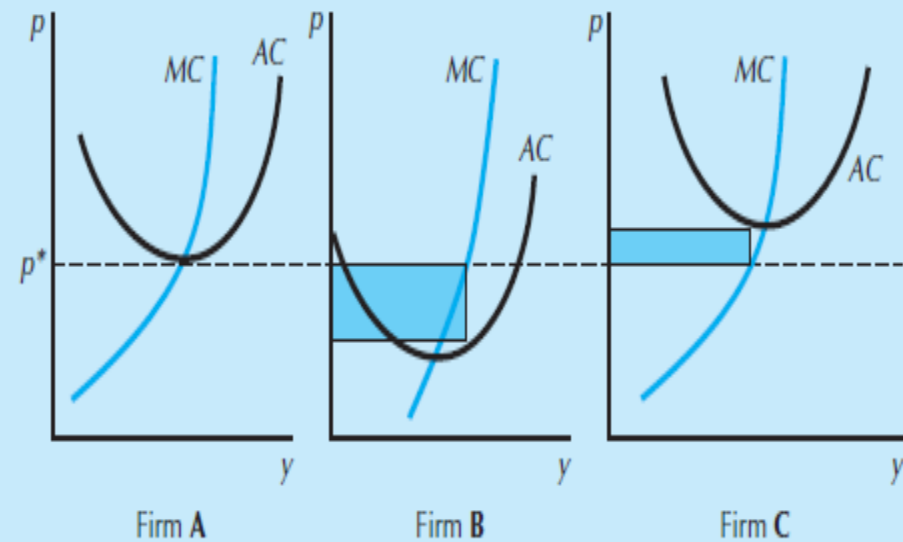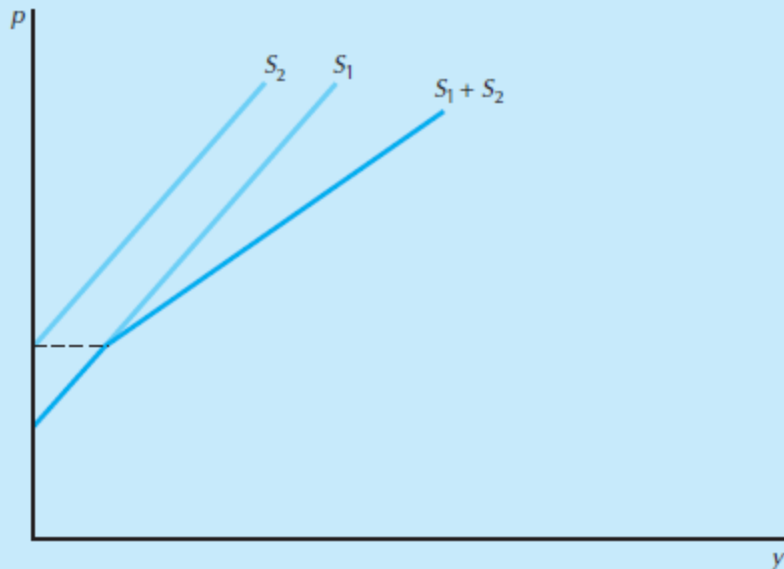
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Short-Run

$$S(p) = \sum_{i=1}^{n} S_i(p)$$

Industry Equilibrium

$p = c(y)/y$ $\qquad\qquad\qquad py - c(y) = 0$

Firm A   Firm B   Firm C

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Long Run industry equilibrium

free entry

barriers to entry
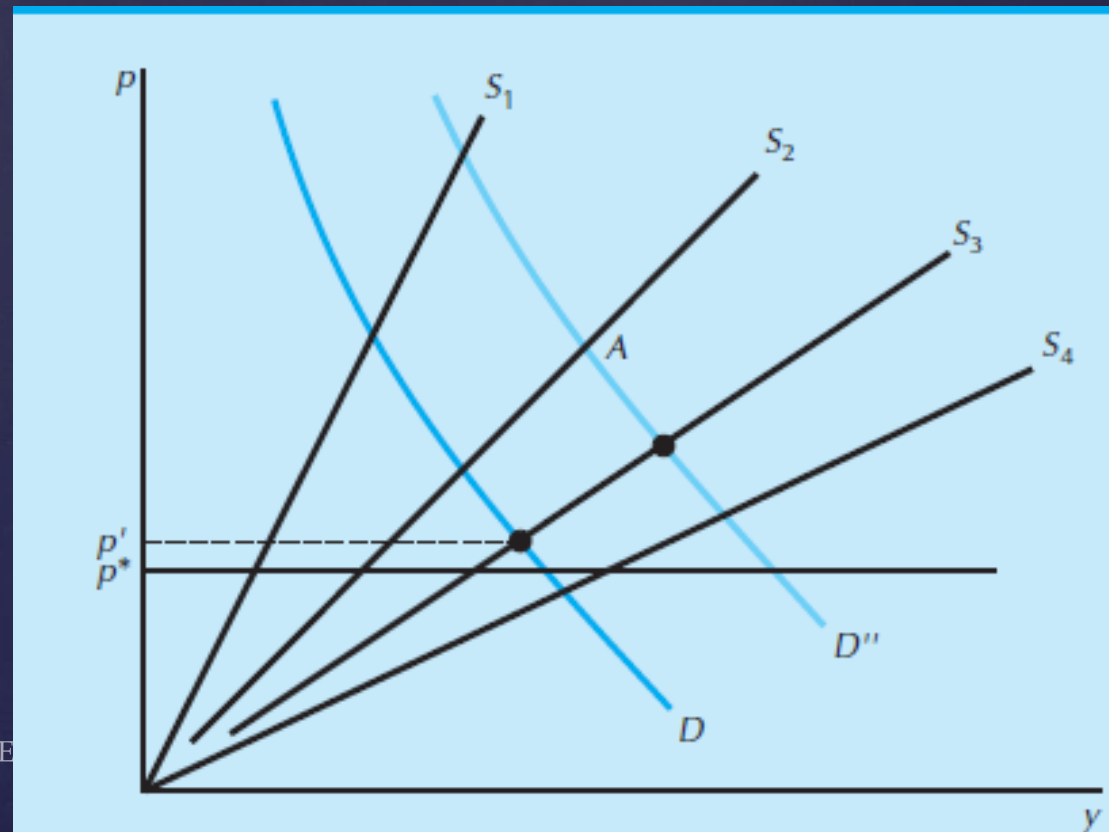
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Long run supply curve
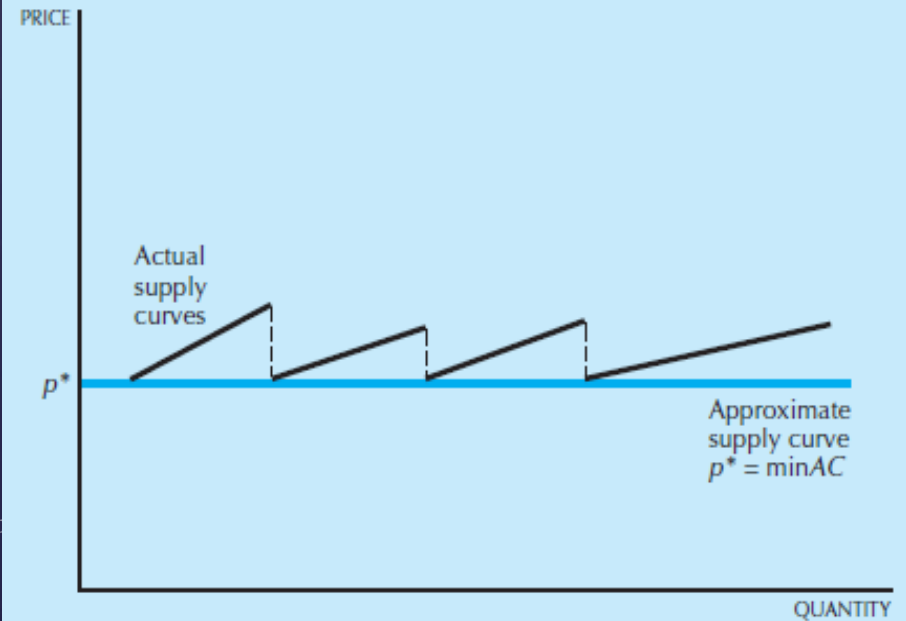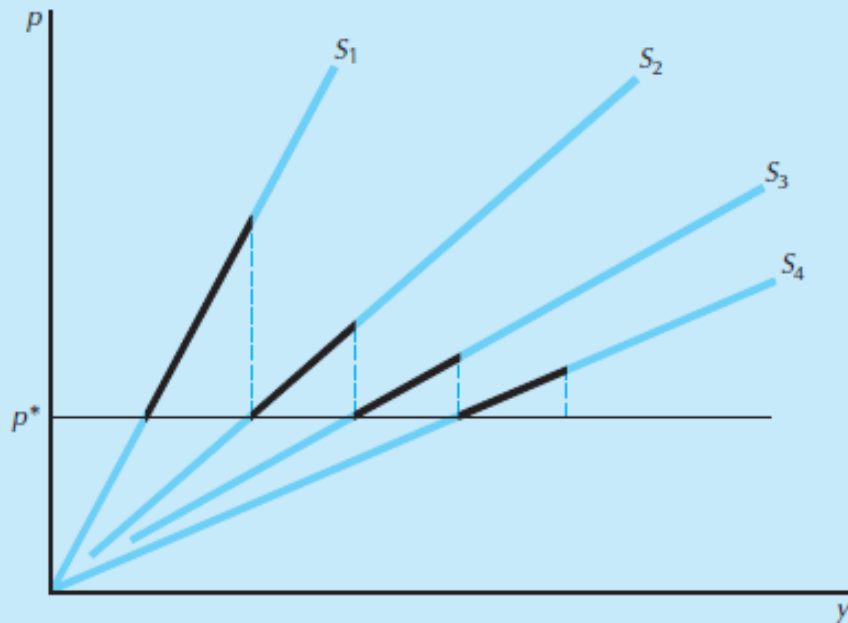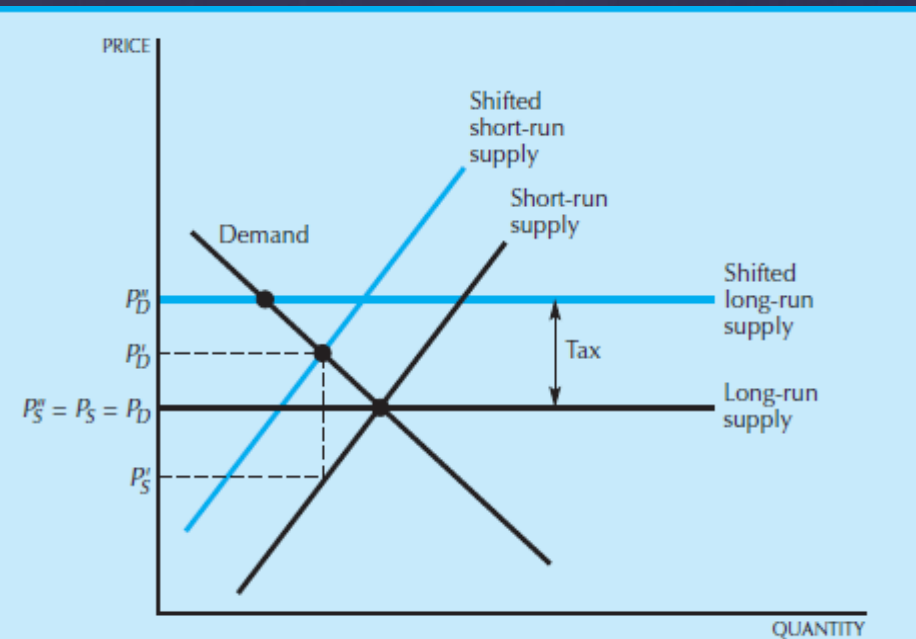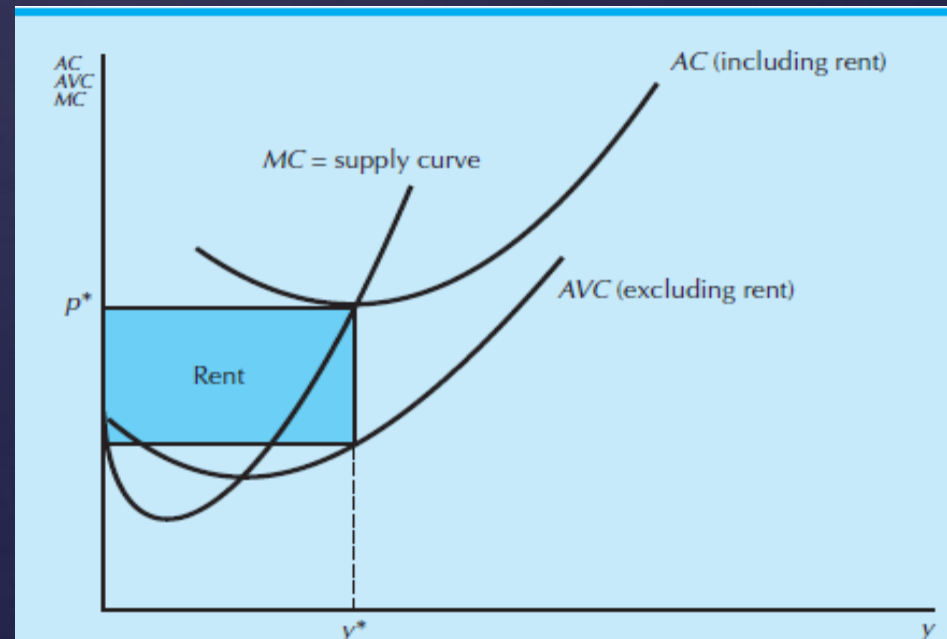
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Taxation

$P_D = P_S$

Short run: $P_S = P_D - t$

Zero Profits

Taxis

economic rent

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Price Controls

The Entitlement Program