

# Economics 101 – Section 5

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Lecture #19 – Tuesday, March 30, 2004

## Chapter 8

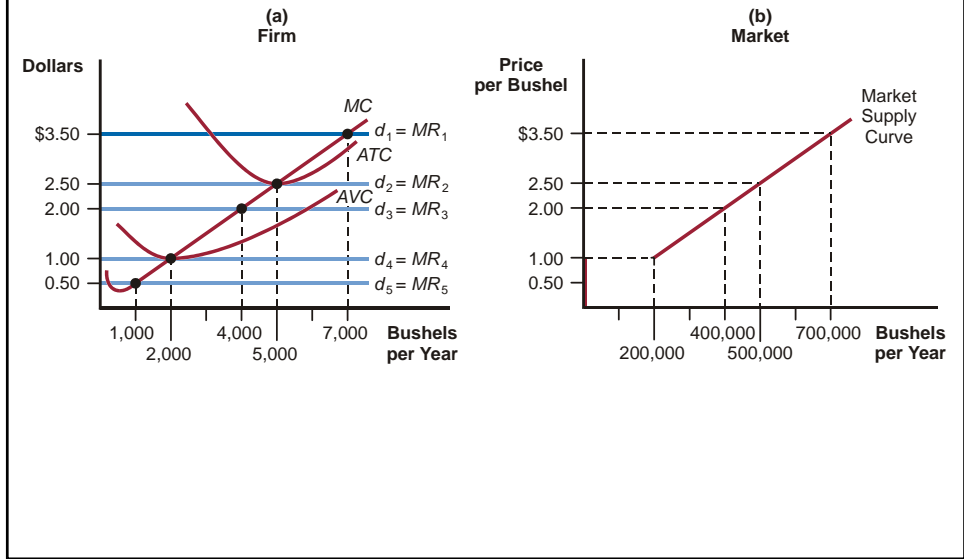
- Competition in the Short-Run
- Competition in the Long-Run
- Technology in the Long-run

## Lecture Overview

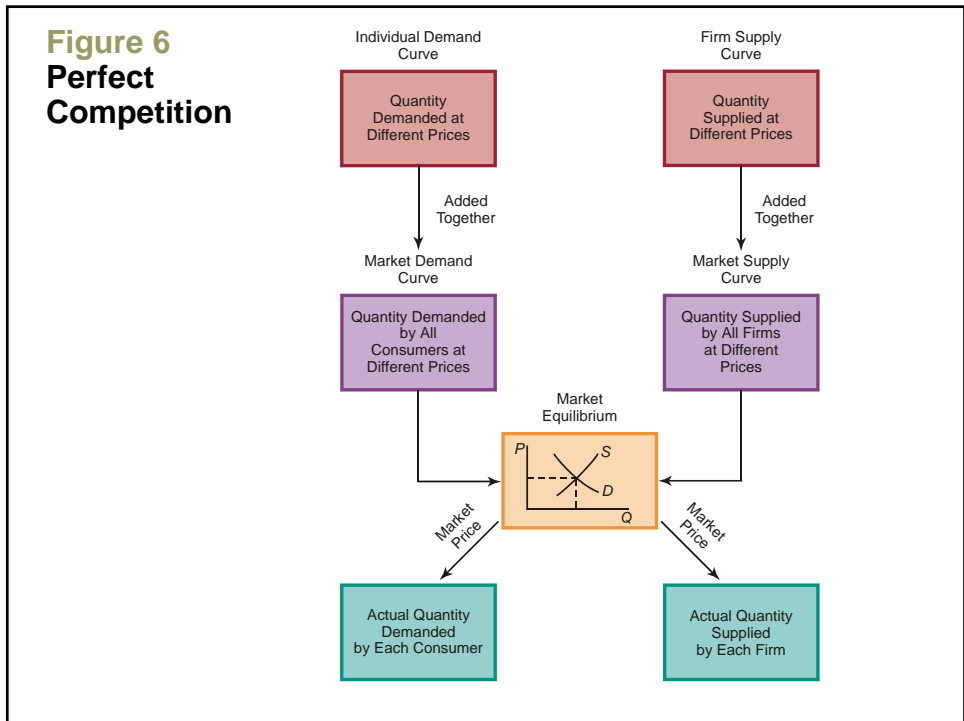
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- NOTE: Exam #3 Thursday April 8<sup>th</sup>
  - Including material since last midterm up to an including the material for next Tuesday.
- Finish up wheat example from last day
- Competition and short-run equilibrium
- Long-run equilibrium
  - Entry and exit from the industry and the long-run
- The role of technology
- Start on monopoly

**Figure 5 Deriving the Market Supply Curve**



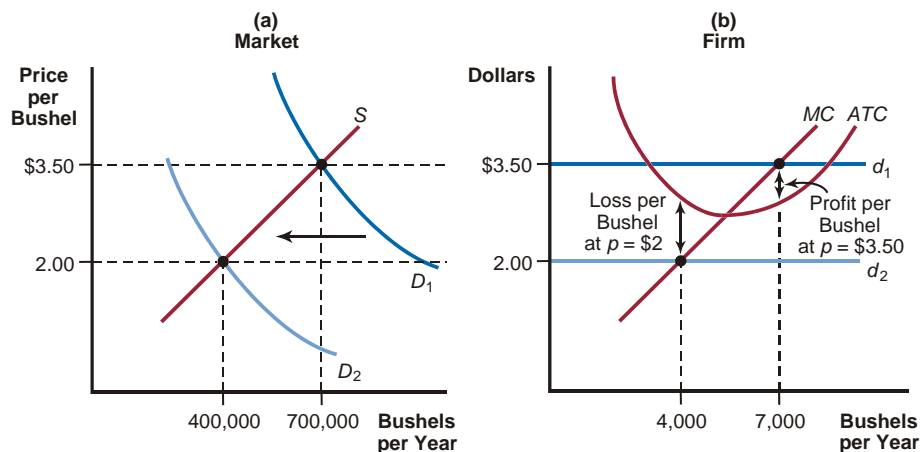
**Figure 6 Perfect Competition**



## Competitive Markets in the SR

- What is going on for individual firms when there are changes in the market price?
  - Would obviously think that as prices go down then firms are going to be worse off
    - Why? Because they are getting less \$
    - How does this tie into their cost structure and all these graphs we have been using?

**Figure 7** Short-Run Equilibrium in Perfect Competition



## Competitive markets in the Long-run (LR)

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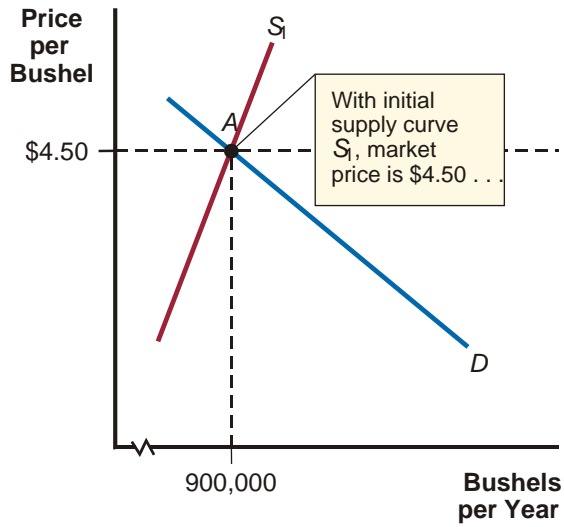
- What happens to firms that are making profits in the short-run? Those making losses?
  - In short,
    - if there is profit more firms will enter
    - If there is loss, firms will exit the industry
- In a competitive market, economic profit and loss are the forces driving long-run change
  - The expectation of continued economic profit causes outsiders to enter the market, the expectation of continued economic losses causes firms in the market to exit

## Competitive markets in the Long-run (LR)

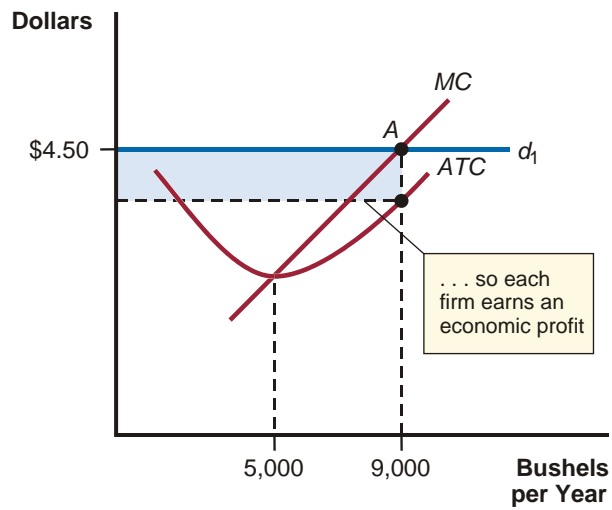
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- Long-run equilibrium
  - If there were profits in the short-run (SR) then entry will shift the market supply to the right until profits are eroded
  - If there were losses in the SR then exit will cause the market supply to shift left until there are no longer any losses.

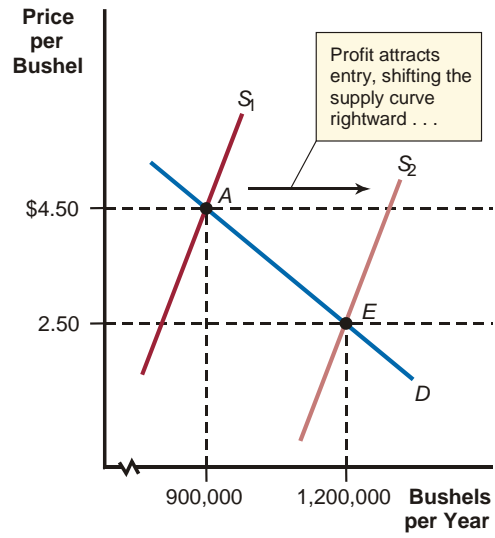
**FIGURE 8a** From Short-Run Profit to Long-Run Equilibrium



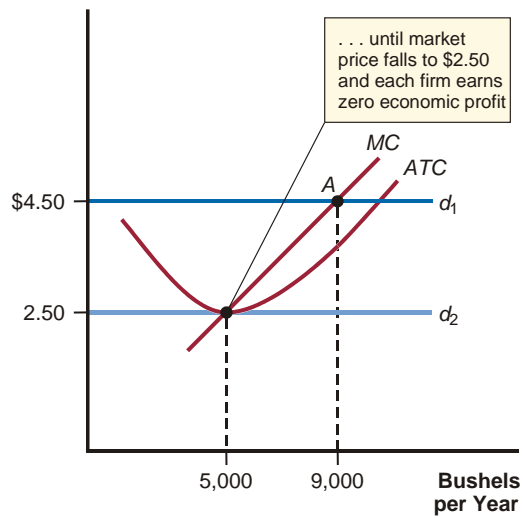
**FIGURE 8b** From Short-Run Profit to Long-Run Equilibrium



**FIGURE 8c** From Short-Run Profit to Long-Run Equilibrium



**FIGURE 8d** From Short-Run Profit to Long-Run Equilibrium



## Competitive markets in the Long-run (LR)

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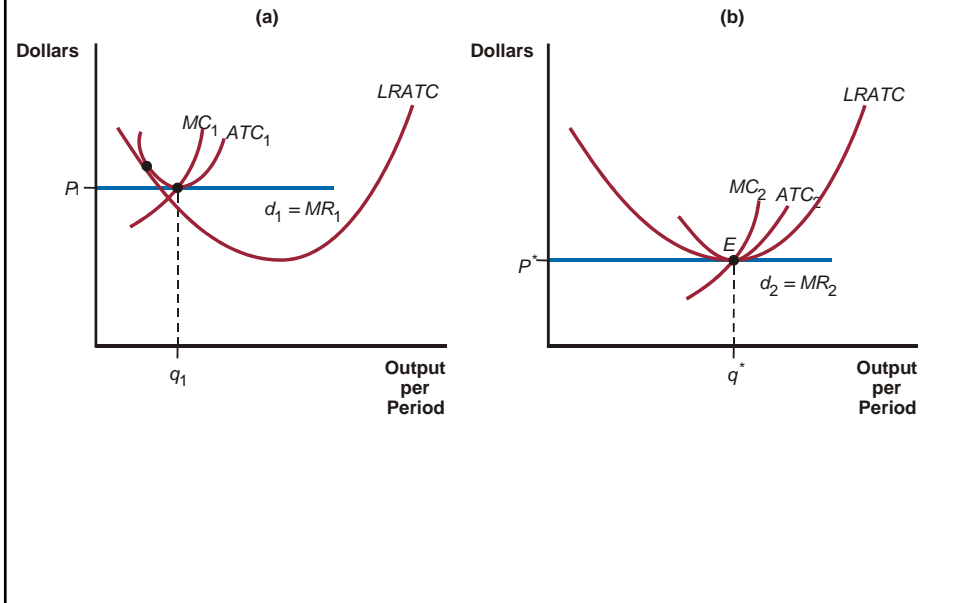
- In the long-run all competitive firms will earn zero economic profit (normal profit)
- Why zero economic profit?
  - Recall the difference between economic profit and accounting profit.
  - A business or firm may be making positive accounting profit but zero economic profit.
  - This zero economic profit basically implies that there is not too much money to be made – i.e. there are acceptable or normal profits to warrant continued operation but they are neither large enough to entice further entry nor low enough to cause additional exit

## Competitive markets in the Long-run (LR)

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- In long-run equilibrium:
  - All competitive firms will select its plant size and output level so that it operates at the minimum point of its LRATC curve
  - Why? – This is the only point where profit is zero in the long run and production still takes place

**Figure 9 Perfect Competition and Plant Size**



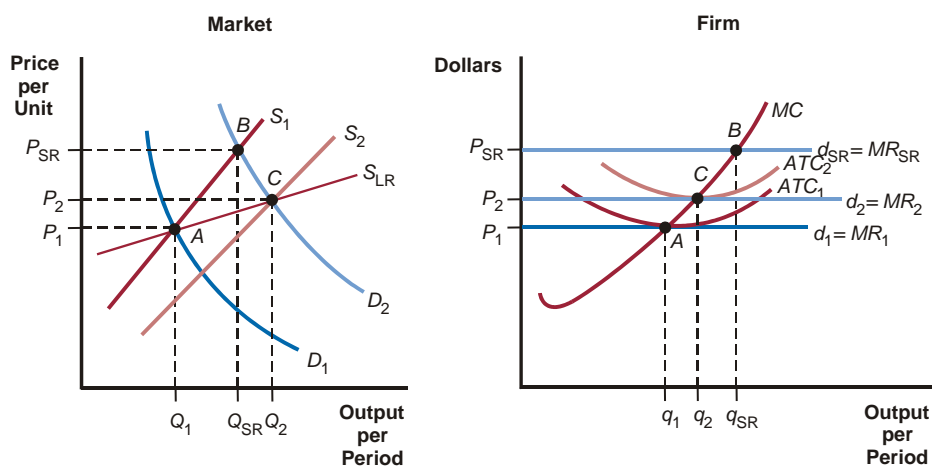
## Competitive markets in the Long-run (LR)

- For every competitive firm in long-run equilibrium the following must hold:
  - $P=MC=\text{minimum ATC}=\text{minimum LRATC}$

## Competitive markets in the Long-run (LR)

- What happens if there is a shift in demand? What will happen to the long-run equilibrium?
- The following is the scenario for an increasing cost industry
  - 1) Move up MC in the SR and firms earn positive economic profits
  - 2) Profits attract new entrants – this increases market supply and drives up ATC
  - 3) A new equilibrium will occur where profits once again return to zero with the new ATC curve
  - 4) The long-run price will be higher than what it was before the demand shock
- Can use this new information to map out the LR market supply curve

**Figure 10 An Increasing-Cost Industry**



## Competitive markets in the Long-run (LR)

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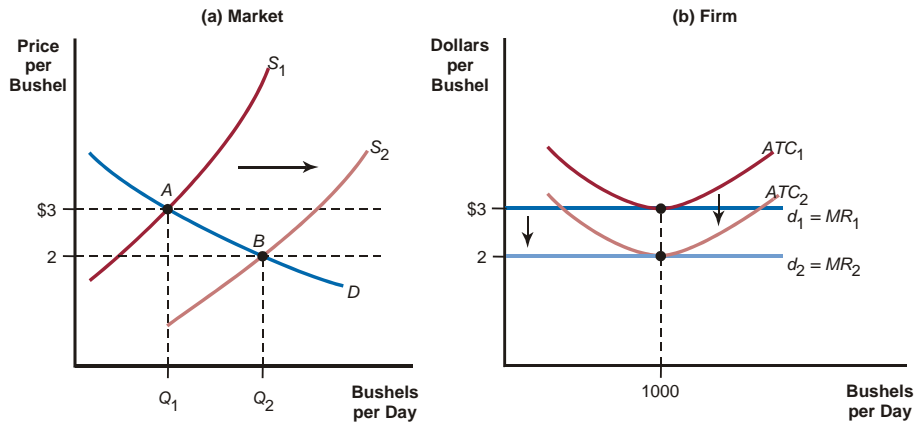
- The long-run supply curve – is the curve indicating the quantity of output that will be supplied at each price after all long-run adjustments have been made
  - Increasing cost industry – The long-run supply curve will be upward sloping
  - Constant cost industry – The long-run supply curve will be flat (horizontal)
  - Decreasing cost industry – The long-run supply curve will be downward sloping

## Changes in technology

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- Under perfect competition – a technological advance making production cheaper or more efficient will cause the market supply curve to shift right
  - This will result in a lower price (and likely a higher quantity traded) in equilibrium
  - Early adopters may make SR profits, but in the LR all firms will earn zero economic profit (or simply normal profit)

**Figure 11** Technological Change in Perfect Competition



## Monopoly

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