# Short-Run Costs and Output Decisions

Chapter Outline

1. Costs in the Short-run
    a. Fixed Costs
    b. Variable Costs
    c. Total Costs
2. Output Decisions: Profit Maximization
3. Short Run Supply Curve

## Costs in the Short-Run

Fixed Costs – any cost that does not depend on the firm's level of output.
Variable Costs – costs that depend on the level of output chosen.
Total Costs – fixed costs plus variable costs.

TC = TFC + TVC

Average Fixed Costs – a per unit measure of fixed costs.
Average Variable Costs – a per unit measure of costs that depend on the level of output chosen.
Average Total Costs – a per unit measure of all costs.

$AFC = \frac{TFC}{Q}$ $AVC = \frac{TVC}{Q}$ $ATC = \frac{TC}{Q}$

ATC = AVC + AFC

Marginal Costs – the additional cost of producing one additional unit of a good or service.

$MC = \frac{\Delta TVC}{\Delta Q}$

## Output Decisions: Profit Maximization

Total Revenue – the amount received from the sale of the product
Marginal Revenue – the additional revenue that a firm makes from selling one additional unit of a good or service.

TR = P*Q $MR = \frac{\Delta TR}{\Delta Q} = P*$

Profit Maximization level of output is MR = MC.

## Short-run Supply Curve

The MC curve above the AVC.