Perfect Competition

In the long run

Short-Run Market Supply and Demand

- While the firm's demand curve is perfectly elastic, the industry's is downward sloping.
- For the industry's supply curve we use a market supply curve.

Short-Run Market Supply and Demand

- The market supply curve is the horizontal sum of all the firms' marginal cost curves, taking account of any changes in input prices that might occur.

Long-Run Competitive Equilibrium

- Profits and losses are inconsistent with long-run equilibrium.
  - Profits create incentives for new firms to enter, output will increase, and the price will fall until zero profits are made.
  - The existence of losses will cause firms to leave the industry.
Long-Run Competitive Equilibrium

- Only at zero profit will entry and exit stop.
- The zero profit condition defines the long-run equilibrium of a competitive industry.

Long-Run Competitive Equilibrium

- Zero profit does not mean that the entrepreneur does not get anything for his efforts.
- Normal profit – the amount the owners of business would have received in the next-best alternative.

Long-Run Competitive Equilibrium

- Normal profits are included as a cost and are not included in economic profit.
- Economic profits are profits above normal profits.
Long-Run Competitive Equilibrium

- Firms with super-efficient workers or machines will find that the price of these specialized inputs will rise.
- *Rent* is the income received by those specialized factors of production.

Long-Run Competitive Equilibrium

- The zero profit condition makes the analysis of competitive markets applicable to the real world.
- To determine whether markets are competitive, many economists focus on whether barriers to entry exist.

Adjustment from the Long Run to the Short Run

- Industry supply and demand curves come together to lead to long-run equilibrium.

An Increase in Demand

- An increase in demand leads to higher prices and higher profits.
- Existing firms increase output.
- New firms enter the market, increasing output still more.
- Price falls until all profit is competed away.
An Increase in Demand

- If input prices remain constant, the new equilibrium will be at the original price but with a higher output.

An Increase in Demand

- The original firms return to their original output but since there are more firms in the market, the total market output increases.

An Increase in Demand

- In the short run, the price does more of the adjusting.
- In the long run, more of the adjustment is done by quantity.

Market Response to an Increase in Demand

- The original firms return to their original output but since there are more firms in the market, the total market output increases.
Long-Run Market Supply

- In the long run firms earn zero profits.
- If the long-run industry supply curve is perfectly elastic, the market is a constant-cost industry.

Two other possibilities exist:

- **Increasing-cost industry** — factor prices rise as new firms enter the market and existing firms expand capacity.
- **Decreasing-cost industry** — factor prices fall as industry output expands.

An Increasing-Cost Industry

- If inputs are specialized, factor prices are likely to rise when the increase in the industry-wide demand for inputs to production increases.

An Increasing-Cost Industry

- This rise in factor costs would force costs up for each firm in the industry and increases the price at which firms earn zero profit.
An Increasing-Cost Industry

• Therefore, in increasing-cost industries, the long-run supply curve is upward sloping.

A Decreasing-Cost Industry

• If input prices decline when industry output expands, individual firms’ marginal cost curves shift down and the long-run supply curve is downward sloping.

A Decreasing-Cost Industry

• Input prices may decline to the zero-profit condition when output rises.

• New entrants make it more cost-effective for other firms to provide services to all firms in the market.

A Decreasing-Cost Industry

• Decreasing-cost industries have downward-sloping supply curves.

• The slope of the long-run supply curve depends on what happens to factor costs when output increases.
An Example in the Real World

- K-mart decided to close over 300 stores after experiencing two years of losses (a shutdown decision).
- K-mart thought its losses would be temporary.

- Price exceeded average variable cost, so it continued to keep some stores open even though those stores were losing money.

- After two years of losses, its prospective changed.
- The company moved from the short run to the long run.
An Example in the Real World

- They began to think that demand was not temporarily low, but permanently low.
- At that point they shut down those stores for which $P < AVC$.

Summary

- Competitive firms maximize profit where $MR = MC$.
- Profit is $P - ATC$ times output at the profit-maximizing level of output.
- Perfectly competitive firms shut down if $P < AVC$.
- The supply curve of a competitive firm is its MC curve above minimum AVC.
- The short-run market supply curve is the horizontal sum of the MC curves for all the firms in the market.

Summary

- In the short run, competitive firms can make a profit or loss. In the long run they make zero profits.
  - If there are profits:
    - Firms enter the industry
    - Supply increases
    - Price decreases, eliminating profit
  - If there are losses:
    - Firms leave the industry
    - Supply decreases

Summary

- The long-run industry supply curve is a schedule of quantities supplied where firms are making zero profit.
  - Constant-cost industries have horizontal long-run supply curves.
  - Increasing-cost industries have upward sloping long-run supply curves.
  - Decreasing-cost industries have downward-sloping supply curves.
  - The slope of the long-run supply curve depends on what happens to factor costs when