Perfectly competitive markets are markets in which firms have no market power and thus can only react to changes in market conditions. These are markets with four characteristics:

1. Many firms, all with no market power
2. Homogeneous goods
3. Free entry and exit
4. Perfect information.

Changes in market supply and demand generate different economic incentives for managers. Understanding these differences helps explain a number of seemingly contradictory observations.

- Why do price and market sales sometimes increase or decrease together?
- Why do we see layoffs or cutbacks by profitable firms in growing industries?
- Why do changes in demand not affect long-term price levels while changes in supply do?
- Why should firms welcome technological advances that lower price?

The main focus in this topic will be in learning to analyze how perfectly competitive markets respond to economic shocks in both the short run and the long run.

Outline

I. Characteristics of Perfectly Competitive Markets

II. The Production Decision - The lack of market power forces firms to be price takers. Without market power, each firm decides how much to produce by comparing the market price with its marginal production costs.

III. Entry and Exit - Over the long run, firms must choose in which markets to operate. Economic profit measures the value to the firm of entering a market. When economic profits are positive, entry is encouraged. When economic profits are negative, exit is encouraged.
IV. Short-run versus Long-run Equilibria - In the short-run, fixed factors of production make entry or exit impossible. Thus, a short-run equilibrium reflects changes at the market level and at the firm level due solely to the firms currently operating in the industry. In the long run, all factors of production are variable and entry and exit is now feasible. In moving from a short-run equilibrium to a long-run equilibrium, only price and quantity changes due to entry and exit are considered. In a long-run equilibrium, the incentive to enter or exit a market must disappear, i.e., economic profits must equal zero.

V. Heterogeneous Firms – When firms differ in terms of their cost functions, firms with lower costs can earn an economic rent. If the lower costs are due to the special abilities of some workers or to unique inputs, some or all of the firm's rent may accrue instead to the worker or other input.

Key Ideas
- In a perfectly competitive market, individual firms cannot change their output enough to noticeably change the market price. This means that changes in market price cause firms to change their output levels instead of changes in firm output causing price to change.
- In a long-run equilibrium firms earn zero economic profit. This does not mean that firms are losing money. When economic profit is zero, accounting profit is positive. Zero economic profit means that the opportunity cost of investing in the firm equals the firm's accounting profit. In other words, economic profit is zero when the firm's accounting profit equals the accounting profit the owners of the firm could earn in the best alternative investment.
- Positive short-run economic profits encourage new firms to enter an industry. Negative short-run economic profits encourage firms to shut down and leave the industry.

Important Skills
- Analyze short-run equilibrium changes in market price, market volume, firm output, and firm profit due to a change in a determinant of supply or demand.
If a determinant of demand changes, first shift market demand to determine the new equilibrium price. Then transfer this price to the firm-level analysis and calculate a new output level. Last, determine if economic profits are positive or negative.

If a determinant of supply changes, first determine if there is any change in each firm's marginal cost and average cost curves. If marginal cost changes for many firms, market supply will change. Shift market supply in the appropriate direction and determine the new equilibrium price and quantity. Use this new price to determine firm output and economic profits.

In both cases, the number of firms in the market does not change.

- Analyze long-run equilibrium changes in market price, market volume, and firm output.

Given a short-run equilibrium, determine if economic profits are positive or negative.

If economic profits are positive, entry will occur causing market supply to increase. Price will fall until economic profits equal zero. That is, price will equal the minimum of average total cost.

If economic profits are negative, exit will occur causing market supply to decrease. Price will rise until economic profits are zero. That is, price will equal the minimum of average total cost.

- Calculate short-run and long-run equilibrium prices, quantities, and profit.

Key Concepts and Terms

Perfectly Competitive Market – A market is perfectly competitive if it consists of many consumers and firms, none of whom have any appreciable market share, if all firms produce identical products, if there are no barriers to entry or exit, and if consumers have perfect information about prices.
**Economic Profit** – A firm's revenues less its economic cost.

**Economic Rent** – The excess amount that the owner of an input receives above the minimum at which he or she is willing to provide the input to a firm.

**Short-run Equilibrium** – A short-run equilibrium is a market price, a market quantity traded, and a level of production for each firm such that, at the market price, the market quantity-demanded equals the market-quantity supplied and each firm's level of production maximizes the firm's economic profit.

**Long-run Equilibrium** – A long-run equilibrium is a market price, a market quantity traded, and a level of production for each firm such that, at the market price, the market quantity-demanded equals the market-quantity supplied and each firm's level of production maximizes the firm's economic profit, and each firm earns zero economic profit.