**Handout: The Demand and Supply Model**

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This handout summarizes the main ideas of the demand and supply model.

**Demand curve**:

The relationship between the quantity demanded of a good and the price of that good (ceteris paribus: keeping everything else constant).

**Factors that affect the demand for a good include**:

Population

Price of the good

Price of other goods

Income

Expectations of future prices,

Tastes and preferences.

**Substitutes and Complements**:

Two goods, x and y, are said to be substitutes if an increase in the price of x (y) increases the demand of good y (x) and a decrease in the price of x (y) decreases the demand for y (x).

Two goods, x and y, are said to be complements if an increase in the price of x (y) decreases the demand for good y (x) and a decrease in the price of x (y) decreases the demand for y (x).

**Normal and Inferior goods**:

A good is said to be normal if an increase (decrease) in income increases (decreases) the demand for the good.

A good is said to be inferior if an increase (decrease) in income decreases (increases) the demand for a good.

**Law of Demand**:

As the price of a good decreases (increases), more (less) of it will be purchased (ceteris paribus: keeping everything else constant). That is, the demand curve is downward sloping. There are two factors that explain this relationship: as the price of a good increases, consumers will substitute into other goods (substitution effect); as the price of a good increases, consumers will have less real income to purchase all goods (income effect).

**Movement versus shift in demand curve**:

A movement along a demand curve is referred to as a change in quantity demanded.

The quantity demanded changes because of a price change.

A shift in the demand curve is referred to as a change in demand.

Demand changes (the demand curve shifts) because of a change in one of the factors affecting demand other than price (income, price of other goods, tastes, population) changes.

**Supply curve**:

The relationship between the quantity supplied of a good and the price of that good (ceteris paribus: keeping everything else constant) is referred to as the supplycurve. The supply curve gives the relationship between price and the quantity produces will wish to sell at that price.

**Determinants of Supply**:

Number of Firms,

Price of Product,

Cost of inputs (Labor, Capital, Materials)

Price of other goods,

Weather (Agricultural products),

Expectations of Future Prices,

Technology.

**Law of Supply**:

As the price of a good increases (decreases), more (less) of it will be produced and offered for sale (ceteris paribus: keeping everything else constant). The supply curve is upward sloping. This is explained by the assumption that marginal (incremental) cost increases as output increases.

**Movements versus shift in supply curve**:

A movement along a supply curve is referred to as a change in quantity supplied. The quantity supplied changes because of a price change.A shift in the supply curve is referred to as a change in supply. Supply changes (the supply curve shifts) because of a change in one of the factors affecting supply other than price changes.

**Equilibrium**:

At the equilibrium price, the quantity demanded by consumers is exactly equal to the quantity supplied by producers.

**Algebraic Determination of Equilibrium (Example)**

QD = 100 - 10P (Demand)

 QS = -50 + 10P (Supply)

Equating QD = QS gives 100 - 10P = -50 + 10P 🡪 20P = 150 🡪 P = 7.50

Using the Demand equation we find Q

 Q = 100 – 10(7.50) = 25

Thus P = 7.50 and Q = 25 represent the equilibrium price and quantity.

**Comparative Statics:**

What are the effects on the equilibrium price and quantity of:

Increase in demand (shift out demand curve);

Decrease in demand (shift in demand curve);

Increase in supply (shift out supply curve);

Decrease in supply (shift in supply curve)

**Summary of the main comparative statics results of the demand and supply model.**

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| The Impact of Market Condition Changes on Equilibrium Price and Quantity |
| Market Change | Impact on Equilibrium Price | Impact on Equilibrium Quantity | Examples |
| Increase in Demand | +  | + | Increase in Income (normal good); increase in price of substitutes; decrease in price of complements; increase in population |
| Decrease in Demand | - | - | Opposite of increase in demand |
| Increase in Supply | - | + | Technological innovation; increase in suppliers; decreases in costs |
| Decrease in Supply | + | - | Increase in costs or wages; increase in price of alternative product produced by firms |