IDX G10 Econ N Level
Study Guide Issue 1
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Contents:

Chapter 1 Ten Principles of Economics

- **Scarcity**
  - The limited nature of society's resources and the unlimited human needs and wants
- **Economics**
  - The study of how society manages its scarce resources to satisfy unlimited wants
- **Business**
  - Combines elements of accountancy, finance, marketing, organizational studies and economics
- **Finance**
  - The field that studies how people make decisions regarding the allocation of resources overtime and the handling of risk
- **Social Science**
  - One that studies people and how they interact with each other
- **Subjectivity**

    - The same facts may tell different stories to different theoretical glasses or look at the facts in different context
- **Limited resources**
    - Land
    - Labor
    - Capital
    - Entrepreneurship
- **Free goods**
    - Not scarce
    - E.g. air, sunlight, ocean
- **Principle #1: People face tradeoffs**
    - All decisions involve tradeoffs
        - E.g. going to a party the night before midterms, no time to study
    - Society faces an important tradeoff: efficiency vs. equality
        - Efficiency: when society gets the most from its scarce resources
        - Equality: when prosperity is distributed uniformly among society's members
        - Tradeoff: to achieve greater equality, could redistribute income from wealthy to poor
- **Principle #2: The cost of something is what you give up to get it**
    - Making decisions requires comparing the costs and benefits of alternative choices.
    - The opportunity cost of any item is whatever must be given up to obtain it.
    - It is the relevant cost for decision making
- **Principle #3 Rational people think at the margin**
    - Rational People
        - Systematically and purposefully do the best they can to achieve their objectives
        - Make decisions by evaluating costs and benefits of marginal changes

Chapter 2 Thinking like an Economist

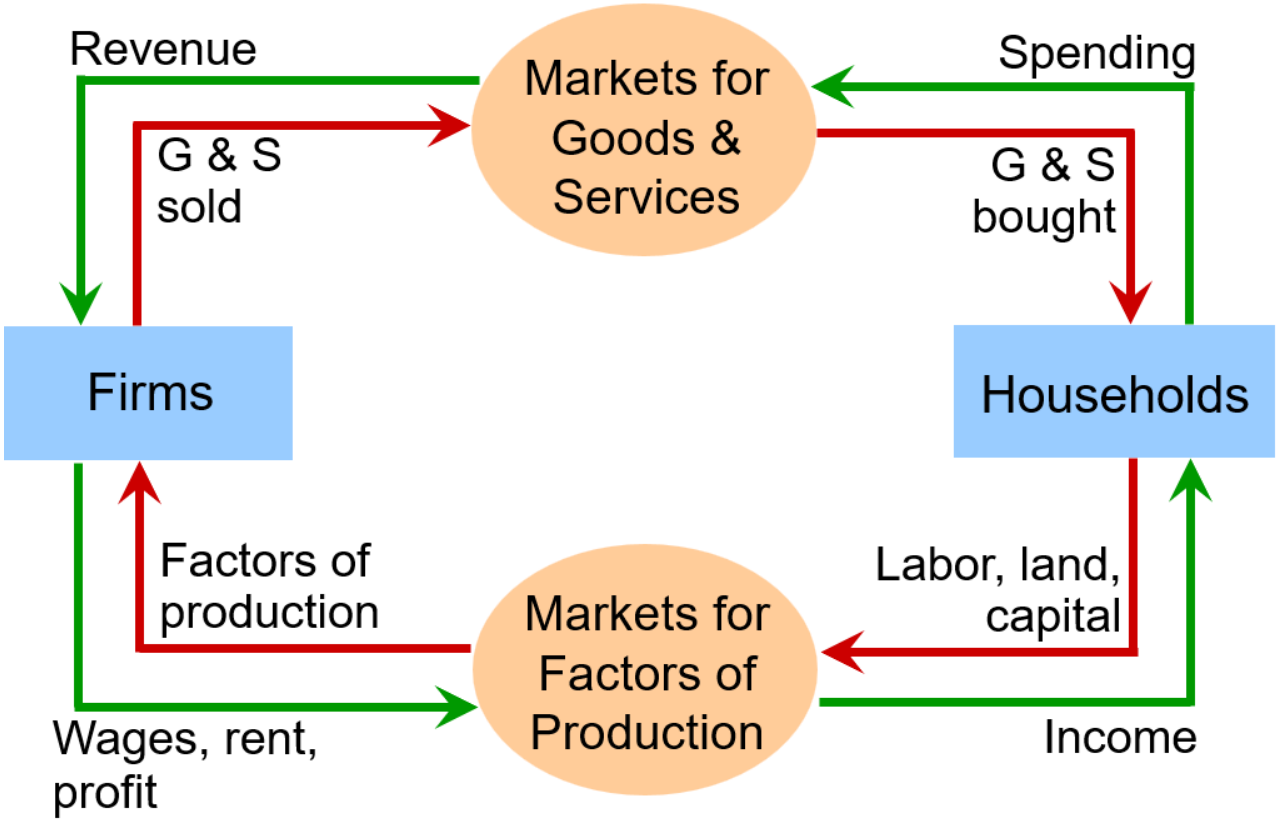
- **Economists play two roles:**
    - Scientists: try to explain the world
    - Policy advisors: try to improve it
- **Scientific method**
    - Dispassionate development and testing of theories about how the world works
    - Observation, theory, more observation

    - Conducting experiments in economics is often impractical
    - Substitute for laboratory experiments
        - Economists pay close attention to the natural experiments offered by history
- **Microeconomics**
    - the study of how households and firms make decisions and how they interact in markets
- **Macroeconomics**
    - the study of economy-wide phenomena, including inflation, unemployment, and economic growth
- These two branches of economics are closely intertwined, yet distinct – they address different questions.
- As scientists, economists make **positive statements**, as policy advisors, economists make **normative statements**
    - Positive statement: A=B
        - Attempt to describe the world as it is
        - Can be confirmed or refuted, normative statement cannot
    - Normative statement: A should be B
        - Attempt to prescribe how the world should be
- Government employs many economists for policy advice

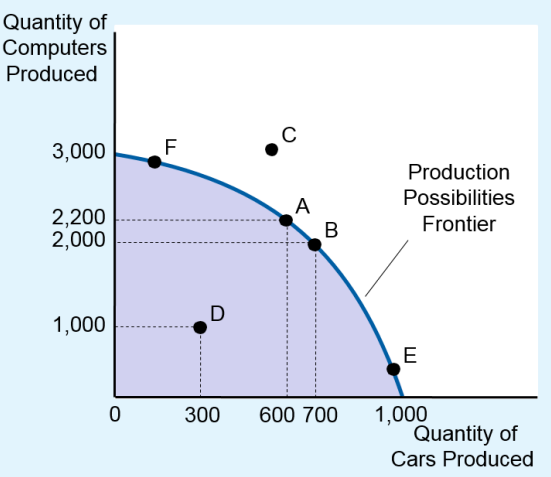
Model 1: Circular flow diagram

- **Factor payments**
    - Rent
    - Wages
    - Interest
    - Profit
- **Factor of production**
    - Labor
    - Land
    - Capital (buildings and machines used in production)
    - Entrepreneur
- **Market**
    - A group of buyers and sellers exchanging for a particular product
    - Markets for goods and services (Product Market)
        - Buyer: Households

        - Seller: Firms
    - **Markets for factors of production (Factor Market)**
        - Buyers: Firms
        - Seller: Households
- **The Circular-Flow Diagram**
    - A visual model of the economy, shows dollars flow through markets among households and firms
    - Two types of "actors":
        - Households
        - Firms
    - **Two market:**
        - The market for goods and services
        - The market for "factors of production"
    - **Firms:**
        - Buy/hire factors of production, use them to produce goods and services
        - Sell goods and services
    - **Households:**
        - Own the factors of production, sell/rent them to firms for income
        - Buy and consume goods and services



Model 2: Production possibilities frontier



- **Production possibilities frontier**
  - A graph
  - Combinations of output that the economy can possibly produce
  - Given the available
    - Factor of production
    - Production technology
  - Scarcity：Points outside PPC - UNATTAINABLE
  - Efficiency：Points on PPC - ATTAINABLE
  - Inefficiency of resources：Points in PPC - ATTAINABLE
- **Efficient levels of production**
  - The economy is getting all it can from the scarce resources available
  - Points on the production possibilities frontier
  - Trade-off:
    - The only way to produce more of one good is to produce less of the other good
    - Moving from point A to point B: give up amount of x to produce amount of y
- **Opportunity cost of producing one good**
  - Give up producing units of the other good
  - Slope of the production possibilities frontier
- **Bowed outward production possibilities frontier**
  - Opportunity cost of a car is highest → when the economy is producing many cars and fewer computers
  - Opportunity cost of a car is lower → when the economy is producing fewer cars and many computers

- **Shape of PPC**
    - Linear: constant opportunity cost, all resources are perfectly adaptable
    - Bowed outward: opportunity cost not constant, resources are not perfectly adaptable, some are better suited for producing one good than another.
- **Technological advance**
    - Outward shift of the production possibilities frontier
    - Economic growth
    - Produce more of both goods

Chapter 4 The Market forces of Supply and Demand

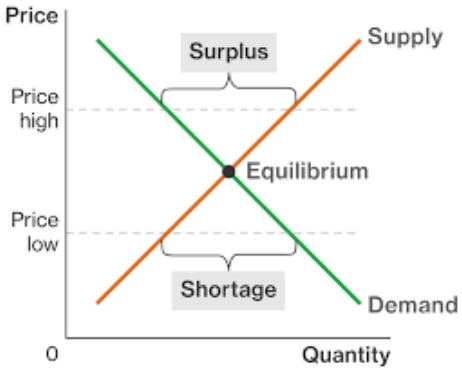
- **Competitive market**
    - one with many buyers and sellers, each has a negligible effect on price
    - In a perfectly competitive market:
        - All goods exactly the same
        - Buyers & sellers so numerous that no one can affect market price – each is a "price taker"
- **Quantity demanded of any good**
    - the amount of the good that buyers are willing and able to purchase
- **Quantity demanded in the market**
    - the sum of the quantities demanded by all buyers at each price
- **Law of demand**
    - the claim that the quantity demanded of a good falls when the price of the good rises, other things equal
- **Demand schedule**
    - a table that shows the relationship between the price of a good and the quantity demanded
- **Demand Curve Shifters**
    - The demand curve shows how price affects quantity demanded, other things being equal
    - These "other things" are non-price determinants of demand:
        - **# of Buyers:** Increase/decrease in # of buyers increases/decreases Q^d at each price, shifts D curve to the right/left
        - **Income:** Demand for a normal good is positively related to income - Increase in income causes increase in quantity demanded at each price, shifts D curve to the

right; Demand for an inferior good is negatively related to income. An increase in income shifts D curves for inferior goods to the left

- **Prices of Related Goods:** Two goods are substitutes/complements if an increase in the price of one causes an increase/fall in demand for the other
- **Tastes:** Anything that causes a shift in tastes toward a good will increase demand for that good and shift its D curve to the right
- **Expectations:** Expectations affect consumers' buying decisions

- **Quantity supplied of any good**
  - the amount of the good that sellers are willing and able to sell
- **Quantity supplied in the market**
  - the sum of the quantities supplied by all sellers at each price
- **Law of supply**
  - the claim that the quantity supplied of a good rises when the price of the good rises, other things equal
- **Supply schedule**
  - a table that shows the relationship between the price of a good and the quantity supplied
- **Supply Curve Shifters**
  - The supply curve shows how price affects quantity supplied, other things being equal
  - These "other things" are non-price determinants of supply
    - **# of Sellers:** Increase/decrease in # of sellers increases/decreases quantity supplied at each price, shifts S curve to the right/left
    - **Input Prices:** A fall/rise in input prices makes production more/less profitable at each output price, so firms supply a larger/smaller quantity at each price, and the S curve shifts to the right/left
    - **Prices of Related Goods:** Goods are substitutes/complement in production if an increase in the price of one cause supplier to supply less/more of the other
    - **Technology:** determines how much inputs are required to produce a unit of output**,** a cost-saving technological improvement has the same effect as a fall in input prices, shifts S curve to the right.
    - **Expectations:** Sellers may adjust supply (If good not perishable) when their expectations of future prices change; Expected higher/ lower prices, decrease/increase in current supply
- **Equilibrium**
  - P has reached the level where quantity supplied equals quantity demanded

- **Equilibrium price**
  - the price at which quantity supplied equals to quantity demanded
- **Equilibrium quantity**
  - the quantity supplied and quantity demanded at the equilibrium price



- **Surplus/Excess supply**
  - When quantity supplied is greater than quantity demanded
    - Facing a surplus, sellers try to increase sales by cutting price
    - This causes Q^d to rise and Q^s to fall which reduces the surplus
  - Prices continue to fall until market reaches equilibrium
- **Shortage/Excess demand**
  - When quantity demanded is greater than quantity supplied
    - Facing a shortage, sellers raise the price
    - This causes Q^d to fall Q^s to rise which reduces the shortage
  - Prices continue to rise until market reaches equilibrium
- **Three Steps to Analyzing Changes in Equilibrium**
  - Decide whether event shifts S curve, D curve, or both
  - Decide in which direction curve shifts
  - Use supply-demand diagram to see how the shift changes equilibrium Price and Quantity
- **Terms for Shift vs. Movement Along Curve**
  - Shift of supply/demand curve
    - Change in supply/demand
    - when a non-price determinant of supply/demand changes
  - Movement along supply/demand curve
    - Change in quantity supplied/demanded
    - when price changes
- **How Prices Allocate Resources**

- One of the Ten Principles from Chapter 1: **Markets are usually a good way to organize economic activity**
- In market economies, prices adjust to balance supply and demand
- These equilibrium prices are the signals that guide economic decisions and thereby allocate scarce resources

Chapter 5 Elasticity and its application

- **Elasticity**
  - a numerical measure of the responsiveness of Q^d or Q^s to one of its determinants
  - measures how much one variable responds to changes in another variable
    - One type of elasticity measures how much demand for your websites will fall if you raise your price
- **Price Elasticity of Demand**
  - measures how much Q^d responds to a change in Price (price-sensitivity of buyers' demand)
  - The flatter the curve, more elastic; steeper the curve, more inelastic

$$\text{Price elasticity of demand} = \frac{\text{Percentage change in } Q^d}{\text{Percentage change in } P}$$

- **Price Elasticity of Supply**
  - measures how much Q^s responds to a change in Price (price-sensitivity of sellers' supply)
  - The flatter the curve, more elastic; steeper the curve, more inelastic

$$\text{Price elasticity of supply} = \frac{\text{Percentage change in } Q^s}{\text{Percentage change in } P}$$

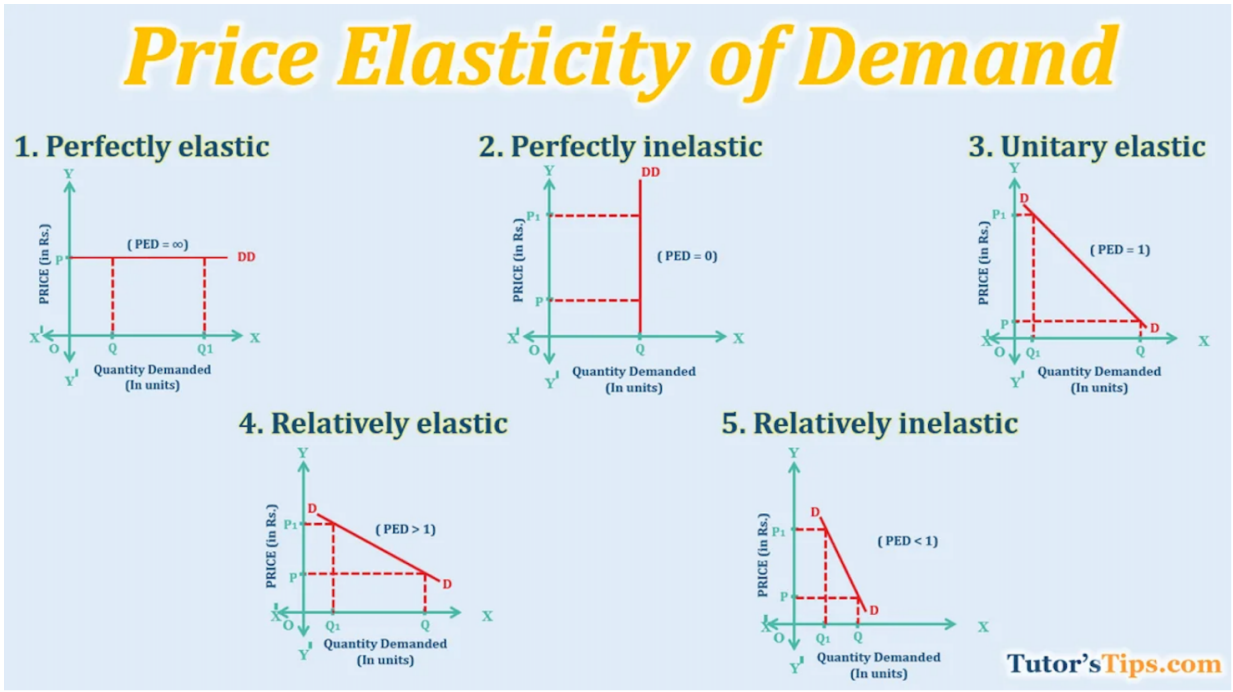
- To calculate PED/PES, use the midpoint method instead of the standard method, so that it doesn't matter which value is used as the start & end value

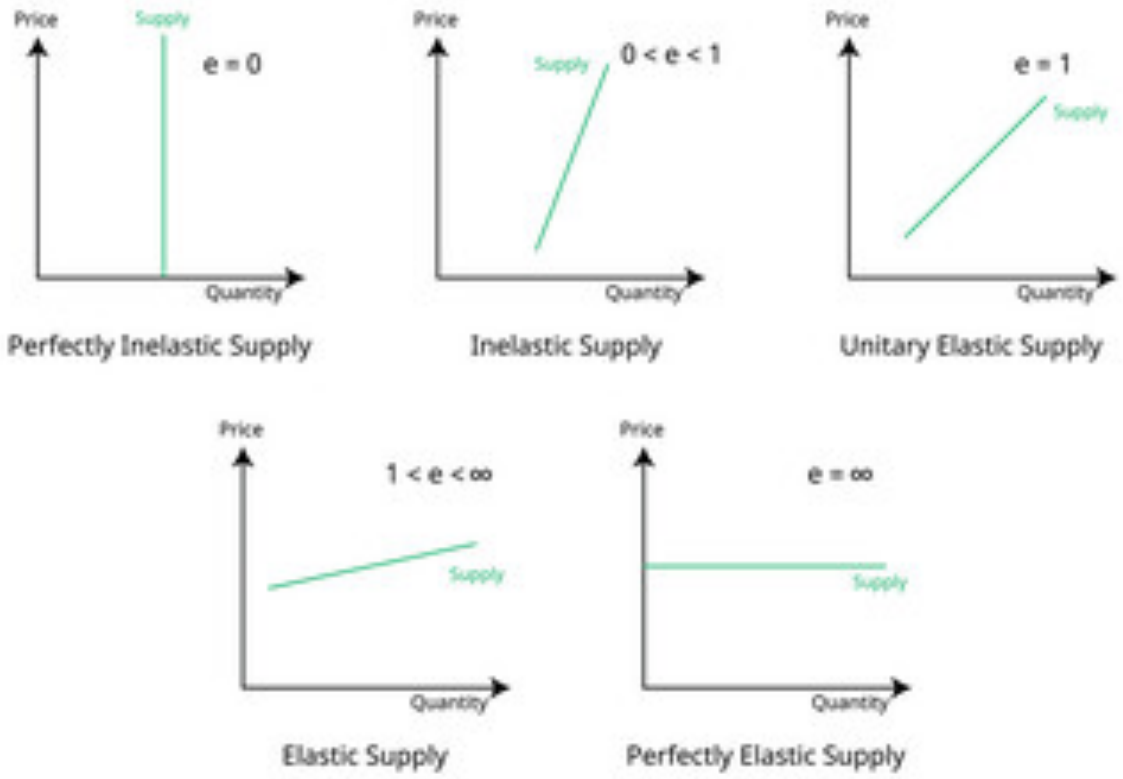
$$\frac{\text{end value} - \text{start value}}{\text{midpoint}} \times 100\%$$

- The price elasticity of demand depends on:
  - the extent to which close substitutes are available
  - whether the good is a necessity or a luxury

- how broadly or narrowly the good is defined
- the time horizon – elasticity is higher in the long run than the short run

- The price elasticity of supply:
  - PES is greater in the long run than in the short run, because firms can build new factories, or new firms may be able to enter the market





Chapter 7 Consumers, Producers, and the Efficiency of Markets

- **Welfare economics**
  - studies how the allocation of resources affects economic well-being
  - the allocation of resources refers to:
    - how much of each good is produced
    - which producers produce it
    - which consumers consume it
- **Willingness to Pay (WTP)**
  - the maximum amount the buyer will pay for that good
  - measures how much the buyer values the good
  - At any Q, the height of the D curve is the WTP of the marginal buyer, the buyer who would leave the market if P were any higher.
- **Consumer surplus (CS)**
  - the amount a buyer is willing to pay minus the amount the buyer actually pays
  - CS = WTP – P
  - Total CS = the area under the demand curve above the price, from 0 to Q
- **Cost**
  - the value of everything a seller must give up to produce a good (i.e., opportunity cost)
  - Includes cost of all resources used to produce good, including value of the seller's time
  - A seller will produce and sell the good/service only if the price exceeds his or her cost, hence cost is a measure of willingness to sell
- **Producer surplus (PS)**
  - the amount a seller is paid for a good minus the seller's cost
  - PS = P – cost
  - Total PS equals the area above the supply curve under the price, from 0 to Q
- **Total surplus**
  - CS + PS
  - = total gains from trade in a market
  - = (value to buyers) – (cost to sellers)
- **Efficiency**
  - An allocation of resources is efficient if it maximizes total surplus. Efficiency means:
    - The goods are consumed by the buyers who value them most highly.
    - The goods are produced by the producers with the lowest costs.
    - Raising or lowering the quantity of a good would not increase total surplus.

- **Market Equilibrium**
    - The buyers who value the good most highly are the ones who consume it
    - The sellers with the lowest cost produced a good
    - The market equilibrium quantity maximizes total surplus: at any other quantity, can increase total surplus by moving towards the market equilibrium quantity
- **The Free Market vs. Govt Intervention**
    - The market equilibrium is efficient. No other outcome achieves higher total surplus
    - Govt cannot raise total surplus by changing the market's allocation of resources.
- This chapter used welfare economics to demonstrate one of the Ten Principles:
    - **Markets are usually a good way to organize economic activity.**