## **IB Economics Study Guide**

### **Economics Introduction**

* **Study of Choice and Scarcity:** Economics is the social science that studies how individuals, institutions, and society make choices under conditions of scarcity.
* **Scarcity:** The fundamental economic problem of having seemingly unlimited human wants and needs in a world of limited resources. Resources are finite, while wants are infinite.
* **Equality:** Refers to treating everyone the same, giving everyone the same opportunities or outcomes.
* **Equity:** Refers to fairness, ensuring everyone has what they need to succeed, which may involve differential treatment to achieve fair outcomes.
* **Private Business Pros/Cons:**
  + **Pros:** Often more efficient, innovative, responsive to market signals, faster decision-making.
  + **Cons:** Focus on profit may neglect social welfare, potential for market failure, less equitable distribution.
* **Public Business (Government/State-owned) Pros/Cons:**
  + **Pros:** Can address market failures, provide public goods, promote equity, stable employment.
  + **Cons:** Often less efficient, bureaucratic, slower decision-making, less responsive to consumer preferences (due to lack of profit motive).
* **Microeconomics vs. Macroeconomics:**
  + **Microeconomics:** Studies the behavior of individual economic units (consumers, firms, industries) and individual markets. Focuses on specific goods and services.
  + **Macroeconomics:** Studies the economy as a whole, focusing on aggregate phenomena like national output, employment, inflation, and economic growth.
* **Scarce Nature of Resources:** All resources are limited, meaning there are not enough to satisfy all human wants at a zero price. This necessitates choices.
* **Four Factors of Production (Resources):**
  1. **Land:** Natural resources (e.g., forests, minerals, water). Payment: Rent.
  2. **Labor:** Human effort, both physical and mental, used in production. Payment: Wages.
  3. **Capital:** Manufactured aids to production (e.g., machinery, factories, infrastructure). Payment: Interest.
  4. **Entrepreneurship:** The special human talent that combines the other three factors to produce goods and services, innovate, and take risks. Payment: Profit.

### **Economic Concepts**

* **Scarcity:** (See above) The fundamental problem of unlimited wants and limited resources.
* **Decision Making:** The process of choosing among alternatives, often involving trade-offs and opportunity costs due to scarcity.
* **Law of Diminishing Marginal Utility:** As a consumer consumes more and more units of a specific good, the additional satisfaction (utility) derived from each successive unit decreases.

### **Production Possibilities Curve (PPC)**

* **PPC:** A curve showing the maximum possible combinations of two goods or services that an economy can produce when all resources are fully and efficiently employed, given the current level of technology.
* **Four Key Assumptions:**
  1. **Only two goods** are produced.
  2. **Full employment** of all available resources.
  3. **Fixed resources/Ceteris Paribus:** The quantity and quality of resources are fixed during the analysis, people are rational.
  4. **Fixed technology:** The state of technology does not change.
* **Point Inside the Curve:** Represents inefficient use of resources or unemployment (economy is producing below its potential).
* **Point Outside the Curve:** Unattainable with current resources and technology. It represents a future production possibility if resources or technology grow.
* **Constant PPC Opportunity Cost:** When resources are perfectly adaptable between the production of two goods, the opportunity cost of producing one more unit of a good remains constant (a straight-line PPC).
* **Increasing PPC Opportunity Cost:** When resources are not perfectly adaptable, the opportunity cost of producing one more unit of a good increases as more of that good is produced (a bowed-out/concave PPC). This is more common and realistic.
* **Three Shifters of the PPC:**
  1. **Resource Quantity/Quality:** An increase in the quantity or improvement in the quality of any factor of production (e.g., more labor, better education, new mineral discoveries) shifts the PPC outward.
  2. **Technology:** An improvement in production technology (e.g., more efficient machines, new production methods) shifts the PPC outward.
  3. **Trade:** Engaging in trade can allow a country to consume beyond its PPC, effectively expanding its consumption possibilities.
* **Capital Goods PPC:** Investing in capital goods (goods used to produce other goods, like machinery) rather than consumer goods today means sacrificing current consumption. However, this investment increases future productive capacity, leading to a larger outward shift of the PPC in the future (economic growth).

### **Circular Flow Model (with Injections and Leakages)**

The circular flow model illustrates the interdependence of economic agents (households, firms, government, financial markets, and the foreign sector) and the flow of money, goods, services, and factors of production in an economy.

* **Household to Factor Market:** Flow of factors of production (land, labor, capital, entrepreneurship) from households to firms.
* **Factor Market to Firms:** Firms purchase/hire factors of production from households.
* **Firms to Goods & Services Market:** Flow of goods and services produced by firms to consumers.
* **Goods & Services Market to Households:** Households purchase goods and services from firms.
* **Households to Firms (spending):** Consumption expenditure (money flow).
* **Firms to Households (income):** Wages, rent, interest, profit (money flow).

**Injections and Leakages:**

* **Leakages (withdrawals from the flow):**
  + **Households to Financial Market:** Savings (S)
  + **Households to Government:** Taxes (T)
  + **Households to Foreign Sector:** Imports (M)
* **Injections (additions to the flow):**
  + **Financial Market to Firms:** Investment (I)
  + **Government to Firms/Households:** Government spending (G)
  + **Foreign Sector to Firms:** Exports (X)

### **Calculating GDP**

* **GDP (Gross Domestic Product):** The total market value of all final goods and services produced within the borders of a country in a given year.
* **Final Goods and Services:** Products sold to the end user; not intermediate goods used in the production of other goods.
* **Market Value:** The price at which goods and services are sold in the market.
* **Expenditure Approach (GDP = C + I + G + NX):** Sums up all spending on final goods and services.
  + **C (Consumption):** Spending by households on durable goods, non-durable goods, and services.
  + **I (Investment):** Spending by firms on capital equipment, construction, and changes in inventories.
  + **G (Government Spending):** Spending by government on goods and services (e.g., infrastructure, defense), excluding transfer payments.
  + **NX (Net Exports):** Exports (X) minus Imports (M).
* **Income Approach:** Sums up all incomes earned from the production of goods and services (wages, rent, interest, profits). (Less commonly used in IB HL for calculation, but conceptual understanding is important).
* **Value Added Approach:** Sums the value added at each stage of production to avoid double counting. (Total revenue minus cost of intermediate goods).

### **Nine Key Economic Concepts (IB Framework)**

1. **Scarcity:** The condition of limited resources relative to unlimited wants.
2. **Choice:** The act of selecting among alternatives due to scarcity, leading to opportunity costs.
3. **Efficiency:** Making the best possible use of resources to avoid waste (productive efficiency) or allocating resources to produce what society wants most (allocative efficiency).
4. **Equity:** The concept of fairness, which may involve different treatment to achieve just outcomes.
5. **Well-being:** A broad concept referring to the welfare of individuals and society, encompassing economic, social, and environmental factors.
6. **Sustainability:** The ability of the present generation to meet its needs without compromising the ability of future generations to meet their own needs.
7. **Change:** The dynamic and evolving nature of economic systems, often driven by innovation, policies, or external shocks.
8. **Interdependence:** The mutual reliance of individuals, firms, and nations on each other in the economy.
9. **Intervention:** The involvement of external entities (usually government) in the workings of the market to address market failures or achieve economic objectives.

### **Positive and Normative Statement**

* **Positive Statement:** A factual statement that can be tested or proven true or false. It describes "what is." (e.g., "An increase in the minimum wage will lead to a decrease in employment.")
* **Normative Statement:** A statement that expresses an opinion or a value judgment, containing words like "should" or "ought to." It describes "what ought to be." (e.g., "The government should increase the minimum wage.")

### **Equity vs. Equality**

* **Equality:** Treating everyone the same, giving everyone the same resources or opportunities.
* **Equity:** Treating everyone fairly, which may involve providing different resources or support to achieve equal outcomes or compensate for disadvantages.

### **Supply and Demand**

* **Law of Demand:** As the price of a good or service increases, the quantity demanded decreases, *ceteris paribus* (all else being equal). (Inverse relationship)
* **Demand vs. Quantity Demanded:**
  + **Quantity Demanded:** The specific amount of a good consumers are willing and able to buy at a specific price (a point on the demand curve). Changes due to a change in the good's own price.
  + **Demand:** The entire relationship between all possible prices and corresponding quantities demanded (the entire demand curve). Changes due to non-price determinants (shifters).
* **Law of Supply:** As the price of a good or service increases, the quantity supplied increases, *ceteris paribus*. (Direct relationship)
* **Supply vs. Quantity Supplied:**
  + **Quantity Supplied:** The specific amount of a good producers are willing and able to sell at a specific price (a point on the supply curve). Changes due to a change in the good's own price.
  + **Supply:** The entire relationship between all possible prices and corresponding quantities supplied (the entire supply curve). Changes due to non-price determinants (shifters).

### **Shifters of Demand**

Factors that cause the *entire* demand curve to shift left (decrease) or right (increase) at every price level:

1. **Tastes/Preferences:**
   * Increase in preference for a good → Demand increases (Right shift).
   * Decrease in preference for a good → Demand decreases (Left shift).
2. **Income:**
   * **Normal Goods:** As income increases, demand for normal goods increases (Right shift). As income decreases, demand decreases (Left shift).
   * **Inferior Goods:** As income increases, demand for inferior goods decreases (Left shift). As income decreases, demand increases (Right shift).
3. **Price of Related Products:**
   * **Substitutes (consumed instead of each other):** If Price of Good A increases, Demand for Good B (substitute) increases (Right shift).
   * **Complements (consumed together):** If Price of Good A increases, Demand for Good B (complement) decreases (Left shift).
4. **Number of Buyers (Market Size):**
   * Increase in number of buyers → Demand increases (Right shift).
5. **Consumer Expectations:**
   * Expectation of future higher prices → Current Demand increases (Right shift).
   * Expectation of future lower prices → Current Demand decreases (Left shift).

### **Shifters of Supply**

Factors that cause the *entire* supply curve to shift left (decrease) or right (increase) at every price level:

1. **Input Prices/Costs of Production:**
   * Increase in input prices (e.g., wages, raw materials) → Supply decreases (Left shift).
   * Decrease in input prices → Supply increases (Right shift).
2. **Technology:**
   * Improvement in technology → Supply increases (Right shift) (more efficient production).
3. **Government Action:**
   * **Taxes:** Increase in per-unit taxes → Supply decreases (Left shift).
   * **Subsidies:** Grant from government → Supply increases (Right shift).
4. **Number of Sellers:**
   * Increase in number of sellers → Supply increases (Right shift).
5. **Producer Expectations:**
   * Expectation of future higher prices → Current Supply decreases (Left shift) (producers hold back stock).
   * Expectation of future lower prices → Current Supply increases (Right shift) (producers sell off stock).
6. **Price of Other Goods the Firm Could Produce:**
   * If price of an alternative good increases, supply of the original good decreases (Left shift) as firms shift production.

### **Normal Goods and Inferior Goods**

* **Normal Goods:** Goods for which demand increases as consumer income increases (and vice versa). Examples: restaurant meals, new cars.
* **Inferior Goods:** Goods for which demand decreases as consumer income increases (and vice versa). Consumers switch to higher-quality alternatives. Examples: instant noodles, public transport (if private car ownership becomes affordable).

### **Market Equilibrium**

* **Market Equilibrium:** The point where the quantity demanded equals the quantity supplied at a specific price. There is no tendency for the price to change.
  + **Equilibrium Price (P\_e):** The price at which quantity demanded equals quantity supplied.
  + **Equilibrium Quantity (Q\_e):** The quantity demanded and supplied at the equilibrium price.
* **Surplus (Excess Supply):** Occurs when Quantity Supplied > Quantity Demanded (QS > QD). Price is above equilibrium, leading to downward pressure on price.
* **Shortage (Excess Demand):** Occurs when Quantity Demanded > Quantity Supplied (QD > QS). Price is below equilibrium, leading to upward pressure on price.

### **Price Mechanism**

The way prices allocate scarce resources in a market economy.

* **Signalling Function:** Prices convey information to producers and consumers about the relative scarcity of resources and goods.
  + High price signals high demand or low supply, encouraging producers to supply more and consumers to demand less.
  + Low price signals low demand or high supply, discouraging production and encouraging consumption.
* **Incentive Function:** Prices create incentives for economic agents to behave in certain ways.
  + High prices incentivize producers to increase output (higher profits) and consumers to conserve or find alternatives.
  + Low prices disincentivize producers and incentivize consumers to buy more.
* **Price Discrimination:** Charging different prices to different consumers for the same good or service when there is no difference in the cost of providing it. Aims to capture more consumer surplus.

### **Consumer Surplus, Producer Surplus, Total Surplus, Deadweight Loss**

* **Consumer Surplus (CS):** The difference between the maximum price consumers are willing to pay for a good and the actual price they pay. It is the area below the demand curve and above the equilibrium price.
* **Producer Surplus (PS):** The difference between the actual price producers receive for a good and the minimum price they are willing to accept. It is the area above the supply curve and below the equilibrium price.
* **Total Surplus (Social Welfare):** The sum of consumer surplus and producer surplus (CS + PS). It is maximized at market equilibrium in a perfectly competitive market.
* **Deadweight Loss (Welfare Loss):** The reduction in total surplus (or social welfare) resulting from an inefficient allocation of resources. It occurs when production or consumption deviates from the socially optimal equilibrium, often due to market failures or government intervention (e.g., taxes, price controls). It points to the lost gains from transactions that do not occur.

### **Cognitive Biases**

Systematic errors in thinking that affect consumers’ ability to perform rational decision-making.

* **Rule of Thumb (Heuristics):** Mental shortcuts or simplified strategies used for quick decision-making, which can lead to biases.
* **Bounded Self-Control:** The idea that individuals have limits to their self-control and often act against their long-term interests due to immediate gratification.
* **Anchoring Bias:** The tendency to rely too heavily on the first piece of information offered (the "anchor") when making decisions.
* **Bounded Rationality:** The idea that individuals' ability to make fully rational decisions is limited by the amount of information they have, their cognitive abilities, and the time available.
* **Bounded Selfishness:** The idea that individuals are not entirely selfish and may exhibit altruism or fairness in their decisions, deviating from purely self-interested behavior.
* **Choice Architecture:** The design of different ways in which choices can be presented to consumers, and the impact of that presentation on consumer decision-making (e.g., default options).

### **Elasticity**

* **Elasticity:** A measure of the responsiveness of one variable to a change in another, expressed as a percentage change.
* **Price Elasticity of Demand (PED):** Measures the responsiveness of quantity demanded to a change in the good's own price.
  + **Formula:** PED=
  + **Interpretation:**
    - **PED > 1 (Elastic Demand):** Quantity demanded changes proportionately more than price. Consumers are very responsive to price changes. (e.g., Luxury goods, many substitutes).
    - **PED < 1 (Inelastic Demand):** Quantity demanded changes proportionately less than price. Consumers are not very responsive to price changes. (e.g., Necessities, few substitutes).
    - **PED = 1 (Unit Elastic Demand):** Quantity demanded changes proportionately equally to price.
    - **PED =** ∞ **(Perfectly Elastic Demand):** Consumers will demand an infinite quantity at a specific price, but none at a higher price (horizontal demand curve).
    - **PED = 0 (Perfectly Inelastic Demand):** Quantity demanded does not change at all regardless of price (vertical demand curve).
* **PED vs. Slope:**
  + **Slope:** Measures the absolute change in price divided by the absolute change in quantity (ΔP/ΔQ). It is constant along a linear demand curve.
  + **PED:** Measures *percentage* changes and therefore varies along a linear demand curve. At higher prices and lower quantities, a linear demand curve is more elastic. At lower prices and higher quantities, it is more inelastic.
* **Price Elasticity of Supply (PES):** Measures the responsiveness of quantity supplied to a change in the good's own price.
  + **Formula:** PES=
  + **Interpretation:**
    - **PES > 1 (Elastic Supply):** Quantity supplied changes proportionately more than price. Producers are very responsive to price changes.
    - **PES < 1 (Inelastic Supply):** Quantity supplied changes proportionately less than price. Producers are not very responsive to price changes.
    - **PES =** ∞ **(Perfectly Elastic Supply):** Producers will supply an infinite quantity at a specific price (horizontal supply curve).
    - **PES = 0 (Perfectly Inelastic Supply):** Quantity supplied does not change at all regardless of price (vertical supply curve).

### **Tax Incidence & Burden of Tax**

* **Tax Incidence:** The division of a tax burden between buyers (consumers) and sellers (producers).
* **Burden of Tax:**
  + **When Demand is more inelastic than Supply (PED < PES):** Consumers bear a greater burden of the tax. The quantity demanded changes little even with a price increase, so producers can pass on most of the tax.
  + **When Supply is more inelastic than Demand (PES < PED):** Producers bear a greater burden of the tax. The quantity supplied changes little, so producers absorb more of the tax to avoid a large drop in quantity demanded.
* **Government Revenue from Tax:** The tax per unit multiplied by the quantity sold after the tax is imposed. (Area of rectangle formed by the tax wedge on the supply-demand diagram).

### **Total Revenue Test (for PED)**

* **Total Revenue (TR) = Price (P)** × **Quantity (Q)**
* **If Demand is Elastic (PED > 1):** If price decreases, total revenue increases. If price increases, total revenue decreases. (Price and TR move in opposite directions).
* **If Demand is Inelastic (PED < 1):** If price decreases, total revenue decreases. If price increases, total revenue increases. (Price and TR move in the same direction).
* **If Demand is Unit Elastic (PED = 1):** Changes in price do not affect total revenue.

### **Other Elasticities**

* **Income Elasticity of Demand (YED):** Measures responsiveness of quantity demanded to a change in consumer income.
  + **Formula:** YED=
  + **Interpretation:**
    - **YED > 0 (Normal Good):** Demand increases as income increases.
      * 0<YED<1 (Income Inelastic Normal Good): Necessity.
      * YED>1 (Income Elastic Normal Good): Luxury.
    - **YED < 0 (Inferior Good):** Demand decreases as income increases.
* **Cross-Price Elasticity of Demand (XED):** Measures responsiveness of quantity demanded of one good to a change in the price of another good.
  + **Formula:** XED=
  + **Interpretation:**
    - **XED > 0 (Substitutes):** Goods are substitutes. If price of B increases, demand for A increases.
    - **XED < 0 (Complements):** Goods are complements. If price of B increases, demand for A decreases.
    - **XED = 0 (Unrelated Goods):** No relationship.

### **Linear Demand and Elasticity**

* For a linear demand curve (straight line), the slope is constant, but the elasticity is **not** constant.
* **Upper part of the demand curve (higher price, lower quantity):** Demand is more elastic.
* **Mid-point of the demand curve:** Demand is unit elastic (PED = 1).
* **Lower part of the demand curve (lower price, higher quantity):** Demand is more inelastic.

### **Government Intervention**

* **Excise Tax (Indirect Tax):** A per-unit tax on the production or sale of a specific good or service (e.g., tax on cigarettes, gasoline).
  + **How it's reflected on the diagram:** An excise tax shifts the supply curve upwards by the amount of the tax (or leftwards, representing a decrease in supply at every price). The new equilibrium will have a higher price for consumers and a lower net price for producers, with a smaller quantity traded. The tax wedge opens between the price consumers pay and the price producers receive.
* **Subsidies:** A payment by the government to producers (or consumers) for each unit of a good produced or consumed.
  + **Purpose:** To encourage production/consumption of a good, reduce production costs, lower prices for consumers, support a specific industry, or correct positive externalities.
  + **How it's reflected on the diagram:** A subsidy shifts the supply curve downwards by the amount of the subsidy (or rightwards, representing an increase in supply at every price). The new equilibrium will have a lower price for consumers and a higher net price for producers, with a larger quantity traded.
* **Forms of Intervention:**
  1. **Price Ceilings:** A legal maximum price that can be charged for a good or service.
  2. **Price Floors:** A legal minimum price that can be charged for a good or service.
  3. **Indirect Taxes:** (See Excise Tax above) Taxes on goods/services.
  4. **Subsidies:** (See above) Government payments.
  5. **Direct Provision:** Government provides goods/services directly (e.g., public education, healthcare).
  6. **Command and Control Regulation:** Government directly mandates or prohibits certain behaviors (e.g., pollution limits, safety standards).
  7. **Consumer Nudges:** Subtle interventions that influence consumer choices without restricting options or changing financial incentives (e.g., default options, placement of goods).

### **Supply-Demand in Labor Market**

* **Derived Demand:** The demand for labor (or any factor of production) is derived from the demand for the goods and services that labor produces. If demand for cars increases, demand for auto workers increases.
* **Monopsony:** A market structure where there is only one dominant buyer of labor (or other factors of production) in a particular market. This firm has market power in hiring and can pay lower wages than in a competitive market.
* **Efficiency Wages:** Wages paid above the market-clearing equilibrium wage to increase worker productivity (e.g., by reducing shirking, improving morale, attracting better workers, reducing turnover).
* **Minimum Wage as Price Floor:** A legal minimum hourly wage that employers must pay. It acts as a price floor in the labor market.
  + If the minimum wage is set *above* the equilibrium wage, it can lead to a **surplus of labor (unemployment)**, as more people are willing to work at that wage than firms are willing to hire.
* **Price Control Pros and Cons:**
  + **Price Ceilings:**
    - **Pros:** Make essential goods affordable for low-income consumers, prevent exploitation during emergencies.
    - **Cons:** Lead to shortages, black markets, reduced quality, inefficient allocation.
  + **Price Floors:**
    - **Pros:** Support producers' incomes, protect workers (minimum wage).
    - **Cons:** Lead to surpluses, inefficient resource allocation, higher consumer prices.
* **Surplus in Labor Market is Unemployment:** When the quantity of labor supplied exceeds the quantity of labor demanded, it results in unemployment.

### **Market Failure**

* **Market Failure:** Occurs when the free market fails to allocate resources efficiently, resulting in a misallocation of resources and a reduction in social welfare (deadweight loss). This means the market outcome is not socially optimal.
* **MPB (Marginal Private Benefit):** The additional benefit to consumers from consuming one more unit of a good. (Reflected by the demand curve).
* **MSB (Marginal Social Benefit):** The total benefit to society from consuming one more unit of a good (MPB + external benefits).
* **MPC (Marginal Private Cost):** The additional cost to producers from producing one more unit of a good. (Reflected by the supply curve).
* **MSC (Marginal Social Cost):** The total cost to society from producing one more unit of a good (MPC + external costs).
* **Socially Optimal Equilibrium:** Occurs where MSB = MSC. This is the point of maximum social welfare, where total surplus is maximized and there is no deadweight loss.
* **Deadweight Loss/Welfare Loss (and how it points to socially optimal):** The area representing the loss of total surplus when the market equilibrium deviates from the socially optimal equilibrium (MSB=MSC). It visually shows the inefficiency caused by market failure.
* **Pigouvian Tax:** A tax levied on activities that generate negative externalities (e.g., pollution) to internalize the external cost and encourage the socially optimal level of output.

### **Types of Market Failure**

1. **Lack of Public Goods:** Markets undersupply or fail to supply public goods.
2. **Externalities:** Positive or negative third-party side effects of production or consumption.
3. **Oversupply of Demerit Goods:** Goods that are harmful to individuals or society (e.g., cigarettes, alcohol) are over-consumed by the market.
4. **Undersupply of Merit Goods:** Goods that are beneficial to individuals or society (e.g., education, healthcare) are under-consumed by the market.
5. **Asymmetric Information:** (See below) Unequal information between parties in a transaction.
6. **Abuse of Market Power:** Monopolies or oligopolies restrict output and charge higher prices than the socially optimal level.

### **Externality**

* **Externality:** A cost or benefit imposed on a third party who is not directly involved in the production or consumption of a good or service.
* **Positive Externality of Production:** Benefits to third parties from production (e.g., R&D by a firm benefits other firms). MSC < MPC, leading to underproduction.
* **Negative Externality of Production:** Costs imposed on third parties from production (e.g., pollution from a factory). MSC > MPC, leading to overproduction.
* **Positive Externality of Consumption:** Benefits to third parties from consumption (e.g., vaccination, education). MSB > MPB, leading to underconsumption.
* **Negative Externality of Consumption:** Costs imposed on third parties from consumption (e.g., second-hand smoke, loud music). MSB < MPB, leading to overconsumption.

### **Public Goods**

* **Public Goods:** Goods that are both **non-rivalrous** and **non-excludable**.
  + **Non-rivalrous:** One person's consumption does not diminish another person's ability to consume the good (e.g., street lights, national defense).
  + **Non-excludable:** It is impossible or prohibitively costly to prevent anyone from consuming the good, even if they don't pay for it.
* **Free-Rider Problem:** Individuals can benefit from a public good without paying for it, leading to under-provision or non-provision by the private market.
* **Why must the government provide these goods?:** Due to the free-rider problem and the non-excludable/non-rivalrous nature, private firms have no incentive to produce public goods as they cannot profit from them. Therefore, government intervention is necessary.

### **Common Resources**

* **Common Resources:** Goods that are **rivalrous** but **non-excludable** (e.g., fish in the ocean, clean air, public grazing land).
* **Tragedy of the Commons:** The tendency for common resources to be overused or depleted because individuals act in their own self-interest, leading to depletion of the shared resource, as no one owns it and therefore no one has an incentive to preserve it.

### **Remedies to Market Failure**

* **Command and Control:** Direct regulations, laws, and mandates to control economic activity (e.g., pollution limits, mandatory recycling).
* **Norms (Social Norms):** Cultural or social expectations that can influence behavior towards socially optimal outcomes (e.g., recycling becomes socially expected).
* **Creating Property Rights:** Assigning ownership of resources (e.g., fishing quotas, pollution permits) to individuals or firms. This internalizes externalities, giving owners an incentive to manage resources sustainably.
* **Pigouvian Taxes/Subsidies:** (See above) Taxes on negative externalities, subsidies for positive externalities.

### **Asymmetric Information**

* **Perfect Information:** A theoretical situation where all parties in a transaction have complete and equal access to all relevant information.
* **Asymmetric Information:** Occurs when one party in a transaction has more or better information than the other.
* **Adverse Selection:** Occurs *before* a transaction, where one party has private information that the other party lacks, leading to undesirable outcomes. (e.g., High-risk individuals are more likely to buy insurance).
* **Death Spiral (in insurance):** A phenomenon where adverse selection leads to a cycle of increasing premiums, decreasing enrollment of healthy individuals, and further premium increases, eventually leading to the collapse of the insurance market.
* **Propitious Selection:** The opposite of adverse selection, where *desirable* parties are more likely to enter a market or take part in a transaction. (e.g., Healthy people choosing specific insurance plans).
* **Moral Hazard:** Occurs *after* a transaction, where one party's behavior changes after entering into an agreement because they are now protected from risk, and the other party cannot perfectly monitor their behavior. (e.g., Insured individuals might become less careful).

### **Production Costs**

* **Profit = Total Revenue - Total Cost**
* **Total Revenue (TR):** The total amount of money a firm receives from the sale of its output. TR=Price×Quantity.
* **Fixed Costs (FC):** Costs that do not vary with the level of output (e.g., rent, insurance, salaries of administrative staff). In the short run, fixed costs exist.
* **Variable Costs (VC):** Costs that change with the level of output (e.g., raw materials, wages for production workers, electricity).
* **Total Costs (TC):** The sum of fixed costs and variable costs. TC=FC+VC.
* **Marginal Product (MP):** The additional output produced by adding one more unit of a variable input (e.g., labor). MP=ΔTotal Product/ΔVariable Input.
* **Average Product (AP):** Total output divided by the quantity of the variable input used. AP=Total Product/Quantity of Variable Input.
* **Law of Diminishing Marginal Returns:** In the short run, as more units of a variable input are added to a fixed input, the marginal product of the variable input will eventually decrease. (This explains the shape of cost curves).

### **Relating Marginal and Average Curves**

* **When Marginal (e.g., MC or MP) is above Average (e.g., ATC or AP):** Average is increasing.
* **When Marginal is below Average:** Average is decreasing.
* **When Marginal equals Average:** Average is at its minimum (for cost curves) or maximum (for product curves). The marginal curve intersects the average curve at its minimum/maximum point.
* **Marginal Product as the Rate of Change of Total Product:** MP measures the slope of the Total Product curve at any given point.

### **Short Run vs. Long Run**

* **Short Run:** A period of time in which at least one resource (factor of production) is fixed. Firms can only vary output by changing variable inputs (e.g., labor, raw materials).
* **Long Run:** A period of time in which all resources (factors of production) are variable. Firms can change the scale of their operations (e.g., build new factories, exit/enter the industry). Not a specific amount of calendar time, but rather a conceptual period.

### **Production Costs (Per Unit)**

* **Average Fixed Cost (AFC):** Total Fixed Cost / Quantity of Output. AFC always decreases as output increases.
* **Average Variable Cost (AVC):** Total Variable Cost / Quantity of Output. AVC typically falls initially, then rises due to diminishing returns.
* **Average Total Cost (ATC):** Total Cost / Quantity of Output, or AFC + AVC. ATC typically falls initially, then rises.
* **Marginal Cost (MC):** The additional cost incurred by producing one more unit of output. MC=ΔTotal Cost/ΔQuantity. MC typically falls initially, then rises due to diminishing returns, and intersects AVC and ATC at their minimum points.

### **Profit, Accountant Profit, Economic Profit**

* **Profit = Total Revenue - Total Cost**
* **Explicit Costs:** Out-of-pocket payments for resources (e.g., wages, rent, raw materials). These are monetary costs.
* **Implicit Costs:** The opportunity costs of resources owned by the firm and used in production (e.g., the owner's foregone salary if they worked elsewhere, the foregone interest on capital invested). These are non-monetary costs.
* **Accounting Profit:** Total Revenue - Explicit Costs. This is what an accountant calculates.
* **Economic Profit:** Total Revenue - (Explicit Costs + Implicit Costs). This is the true profit from an economic perspective, considering all opportunity costs.
* **Normal Profit:** The minimum economic profit a firm needs to make to cover all its explicit and implicit costs, ensuring the firm stays in business in the long run. Occurs when Economic Profit = 0. It is considered a cost within economic profit calculation.
* **Abnormal Profit (Supernormal Profit):** Economic profit greater than zero. The firm is earning more than enough to cover all its opportunity costs.

### **Maximizing Profits (MR=MC)**

* **Profit Maximization Rule:** A firm maximizes profit (or minimizes loss) by producing the quantity of output where **Marginal Revenue (MR) = Marginal Cost (MC)**.
* **Marginal Revenue (MR):** The additional revenue gained from selling one more unit of output.
* **MR as the Equilibrium Price of Industry:** In perfect competition, because firms are price takers, MR = Price (P). For imperfectly competitive firms, MR < P.

### **Shut Down Rule**

* **Short-Run Shut Down Rule:** A firm should shut down in the short run if its Total Revenue (TR) is less than its Total Variable Costs (TVC), or if Price (P) is less than its Average Variable Cost (AVC). If P < AVC, the firm is not even covering its variable costs, so it should cease production to minimize losses (which would then only be its fixed costs). If P > AVC, the firm should continue to produce even if making an economic loss, as it is contributing to covering its fixed costs.

### **Market Structures (Categorizing as Imperfect Competition)**

All market structures other than perfect competition are considered **Imperfect Competition**.

#### **1. Perfect Competition**

* **Characteristics:**
  + **Many small firms:** Each firm is insignificant relative to the market.
  + **Low barriers to entry and exit:** Easy for firms to enter or leave the industry.
  + **Homogeneous/Identical products:** All firms produce identical products, so consumers have no preference for one firm's product over another's.
  + **Perfect information:** Both buyers and sellers have complete information.
  + **No need to advertise:** Products are identical.
  + **Every firm is a price taker:** Individual firms have no market power and must accept the market price.
* **Firm's Demand Curve:** Perfectly elastic (horizontal) at the market equilibrium price.
* **Relationship:** **MR = D = AR = P** (Marginal Revenue = Demand = Average Revenue = Price).
* **Short-Run Supply Curve:** The portion of the firm's Marginal Cost (MC) curve that lies **above its Average Variable Cost (AVC) curve**.
* **Taxes (Impact):** Per-unit taxes shift the firm's MC and ATC curves upward. This leads to a decrease in the firm's profit-maximizing output and may lead to economic losses, potentially causing firms to exit in the long run.
* **Long-Run Perfect Competition:**
  + Firms earn **normal profit** (zero economic profit) due to free entry and exit.
  + If firms earn abnormal profits, new firms enter, increasing market supply, driving down price until economic profits are zero.
  + If firms incur economic losses, firms exit, decreasing market supply, driving up price until economic losses are eliminated.
  + **Long-Run Market Supply Curve:** Horizontal (perfectly elastic) if input prices are constant as industry expands.

#### **2. Monopoly**

* **Characteristics:**
  + **Single seller:** One firm dominates the entire market.
  + **High (insurmountable) barriers to entry:** Very difficult or impossible for new firms to enter.
  + **Unique product (no close substitutes):** Consumers have no other options.
  + **Price Maker:** The firm has significant market power and can influence the price.
* **Firm's Demand Curve:** The market demand curve, which is downward-sloping.
* **Relationship:** **D > MR** (Demand curve is above the Marginal Revenue curve).
* **Profit Maximization:** Still **MR = MC**.
* **Shutdown Rule:** Still **P < AVC** (in the short run).
* **Inefficiency:** Monopolies are allocatively inefficient (P > MC) and productively inefficient (don't produce at min ATC). They charge a higher price and produce a lower quantity compared to perfect competition, leading to deadweight loss.
* **Natural Monopolies:** Occur when economies of scale are so extensive that a single firm can produce the entire market output at a lower average cost than multiple firms. Often regulated by government (e.g., utilities). Graphically, ATC continues to fall over the relevant range of output.

#### **3. Monopolistic Competition**

* **Characteristics:**
  + **Many firms:** A relatively large number of firms, but fewer than perfect competition.
  + **Low barriers to entry and exit:** Relatively easy for firms to enter or leave.
  + **Differentiated products:** Products are similar but slightly different (e.g., branding, quality, features, location), giving each firm some degree of market power. This leads to advertising.
  + **Some control over price:** Due to product differentiation.
* **Firm's Demand Curve:** Downward-sloping, but relatively elastic (D>MR) compared to monopoly due to availability of substitutes.
* **Graph:** Similar to a monopoly in the short run (can earn economic profits).
* **Excess Capacity:** Firms produce at an output level less than the one that minimizes average total cost (they don't produce at the bottom of their ATC curve). This means they could produce more at a lower average cost but choose not to, due to their downward-sloping demand curve.
* **Long-Run Adjustment:** If firms earn economic profits, new firms enter, increasing the number of substitutes, which makes the existing firms' demand curves more elastic and shifts them leftward until economic profits are zero (only normal profit). If firms incur losses, firms exit, demand curves shift right until losses are eliminated.

#### **4. Oligopoly**

* **Characteristics:**
  + **Few large firms:** A small number of dominant firms (e.g., 2-10) control a large proportion of the market.
  + **High barriers to entry:** Difficult for new firms to enter due to scale economies, patents, control of resources, etc.
  + **Interdependence:** Firms' decisions significantly affect each other, leading to strategic behavior.
  + **Homogeneous or Differentiated Products:** Can produce either (e.g., steel vs. cars).
* **John Nash & Game Theory:** Analyzes strategic interactions between rational decision-makers. Oligopolies are often analyzed using game theory (e.g., Prisoner's Dilemma).
* **Nash Equilibrium:** A situation in a game where no player can improve their outcome by unilaterally changing their strategy, given the other players' strategies.
* **Collusive Oligopoly (Cartel):** Firms explicitly or implicitly agree to limit competition (e.g., set prices, divide markets) to act like a monopoly.
  + **Graph:** Acts similar to a monopoly, producing less and charging more, leading to higher profits for the cartel.
* **Non-Collusive Oligopoly:** Firms compete without explicit agreements. Often characterized by price rigidity (kinked demand curve model) or intense price wars.
* **Dominant Strategy:** A strategy that is the best response for a player regardless of what other players do.
* **Price Leadership:** One dominant firm announces price changes, and other firms in the industry follow.

### **Macroeconomics Objectives**

* **Economic Growth:** An increase in the productive capacity of an economy over time, typically measured by the percentage change in real GDP.
* **High Employment (Low Unemployment):** Maximizing the use of labor resources; aiming for the natural rate of unemployment.
* **Price Stability (Low and Stable Inflation):** Avoiding rapid increases (inflation) or decreases (deflation) in the general price level.
* **Sustainable National Debt:** Managing the government's accumulated debt to avoid negative long-term economic consequences.
* **Equitable Income Distribution:** Ensuring that economic benefits are shared fairly across the population.

### **GDP Definition and Components**

* **GDP:** "The total market value of all final goods and services produced within the borders of a country in one year."
  + **Final Goods and Services:** Products consumed by the ultimate end-user; not intermediate goods (e.g., flour is intermediate, bread is final).
  + **Market Value:** The price at which goods and services are traded in the market.
* **Value Added Approach to GDP:** Sums up the market value added at each stage of production. For example, wheat value + miller's value added + baker's value added = bread's final value. Avoids double-counting.
* **What's Left Out in GDP:**
  + **Illegal/Underground Economy:** Transactions not reported to the government.
  + **Non-market Production (Directly Consumed):** Goods and services produced and consumed within households (e.g., DIY home repairs, gardening).
  + **Transfer Payments:** Payments not made in exchange for goods or services (e.g., social security, welfare payments).
  + **Used Goods/Financial Transactions:** Sale of used goods or stocks/bonds (no new production).

### **GNI (Gross National Income)**

* **GNI:** GDP + Net Income from Abroad.
  + **Net Income from Abroad:** Income earned by domestic residents from abroad minus income earned by foreign residents domestically.
  + GDP focuses on production *within borders*, GNI focuses on income earned by *residents*.

### **Economic Growth & GDP Per Capita**

* **Economic Growth:** (See above) Percentage change in real GDP. Represents an outward shift of the PPC.
* **GDP Per Capita:** GDP divided by the population. A better measure of average living standards than total GDP, as it accounts for population size.

### **Limitations of GDP**

* **Does not reflect income distribution:** A high GDP can mask large disparities in wealth.
* **Does not reflect sustainability:** High GDP might come at the cost of environmental degradation or depletion of resources.
* **Does not reflect efficiency of resource allocation:** A high GDP does not guarantee efficient use of resources.
* **Production in country, not income:** GDP measures output within geographical borders, not necessarily income received by its citizens (GNI is better for this).
* **Excludes unrecorded transactions:** Misses the informal/underground economy.
* **Does not account for non-market activities:** Volunteer work, household production.
* **Does not reflect quality of life/well-being:** Ignores factors like leisure, happiness, health, education, pollution, crime.

### **Real GDP: Nominal vs. Real Value**

* **Nominal Value:** Measured in current prices. Not adjusted for inflation.
* **Real Value:** Measured in constant prices (from a base year). Adjusted for inflation. Provides a more accurate picture of actual output changes.
* **Real GDP Formula (using GDP Deflator):** Real GDP=(Nominal GDP/GDP Deflator)×100
* **CPI (Consumer Price Index):** A measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. Used to calculate inflation.
* **Real Value (using CPI for general price adjustment):** Real Value=(Nominal Value/CPI)×100
* **Deflation:** A sustained decrease in the general price level (negative inflation rate).
* **Disinflation:** A decrease in the rate of inflation (prices are still rising, but at a slower pace).

### **Business Cycle**

* **Business Cycle:** The periodic fluctuation in economic activity (real GDP) around its long-term growth trend. Consists of phases:
  + **Peak:** Highest point of economic activity.
  + **Contraction/Recession:** Period of declining real GDP.
  + **Trough:** Lowest point of economic activity.
  + **Expansion/Recovery:** Period of increasing real GDP.
* **Full Employment:** The economy is producing at its potential output; unemployment is at its natural rate. Real GDP tends to return to the full employment level over time.
* **Natural Rate of Unemployment (NRU):** The sum of frictional and structural unemployment. The lowest sustainable rate of unemployment achievable when the economy is operating at its full potential output.
  + **Frictional Unemployment:** Temporary unemployment associated with job search (e.g., people voluntarily changing jobs, new entrants).
  + **Structural Unemployment:** Unemployment resulting from a mismatch between the skills workers have and the skills demanded by employers, often due to technological change or shifts in industry structure.
* **Cyclical Unemployment:** Unemployment caused by a downturn in the business cycle (recession). It is unemployment above the natural rate.
* **Real GDP = Output Quantity** × **Price Level:** This is a simplification; Real GDP focuses on the quantity of output produced.

### **Relating Business Cycle, PPC, and AD-AS**

* **Business Cycle & PPC:**
  + During a recession (contraction), the economy is operating *inside* its PPC (inefficient use of resources, unemployment).
  + During expansion, the economy moves towards its PPC.
  + Economic growth (shift of PPC outward) represents the economy's long-term potential, expanding the maximum output achievable.
* **Business Cycle & AD-AS:**
  + **Recession:** Caused by a decrease in Aggregate Demand (AD) or Aggregate Supply (AS), leading to lower real GDP and higher unemployment.
  + **Expansion:** Caused by an increase in AD or AS, leading to higher real GDP and lower unemployment.
  + **Stagflation:** A period of high inflation and high unemployment, usually caused by a negative supply shock (AS shifts left).
* **Long-Run Aggregate Supply (LRAS):** Represents the economy's potential output (full employment output). Shifts in LRAS are caused by factors of economic growth (e.g., technological innovation, increased investment in human/physical capital, high economic freedom, political stability, low inflation).

### **Speculative Bubble**

* **Speculative Bubble:** A sharp and steep rise in asset prices (e.g., stocks, housing, cryptocurrencies) fueled by high levels of speculative demand, where buyers purchase assets based on expectations of future price increases rather than fundamental value.
* **Stages of a Speculative Bubble:**
  1. **Stealth Phase:** Smart money or insightful investors quietly buy, price increases slowly.
  2. **Awareness Phase:** More investors notice, prices rise faster.
  3. **Mania Phase:** Public gets involved, irrational exuberance, prices skyrocket, "greater fool theory."
  4. **Blow-off Phase/Crash:** Prices collapse rapidly as investors realize prices are unsustainable, often leading to a financial crisis.
* **Government Role:** Requires government/central bank intervention (e.g., tightening monetary policy, regulation) to calm the economy and prevent/mitigate the impact of bubbles bursting.

### **Informal Economy Estimation**

* **Informal Economy:** Economic activities that are not officially recorded or taxed by the government.
* **Ways to Estimate Size:**
  + **Demand for Liquidity:** High demand for cash (especially large denominations) may indicate a larger informal sector.
  + **Electricity Use:** Discrepancies between official GDP growth and electricity consumption growth (if electricity consumption grows faster, it might indicate unrecorded activity).
  + **Discrepancy between expenditure and income data.**
  + **Survey methods:** Directly asking about informal activities.

### **Aggregate Demand (AD) & Aggregate Supply (AS)**

* **Aggregate:** Total or combined.
* **Aggregate Demand (AD):** The total quantity of all goods and services demanded in an economy at different price levels, *ceteris paribus*. It is the sum of Consumption (C), Investment (I), Government Spending (G), and Net Exports (NX). AD=C+I+G+NX.
* **Why AD is Downward Sloping:**
  1. **Real-Wealth Effect (or Pigou Effect):** A higher price level reduces the real value (purchasing power) of financial assets (like savings), making consumers feel poorer and thus reducing consumption.
  2. **Interest-Rate Effect:** A higher price level increases the demand for money. If the money supply is fixed, this drives up interest rates, which reduces interest-sensitive consumption (e.g., cars) and investment spending.
  3. **Foreign-Trade Effect (or Net Export Effect):** A higher domestic price level makes domestic goods relatively more expensive compared to foreign goods, leading to a decrease in exports and an increase in imports, thus reducing net exports.
* **Aggregate Supply (AS):** The total quantity of all goods and services supplied in an economy at different price levels.
* **Types of AS Curves:**
  + **Short-Run Aggregate Supply (SRAS):** Upward-sloping. In the short run, wages and other input prices are sticky (slow to adjust) to changes in the price level. When the price level rises, firms' revenues increase faster than their costs, incentivizing them to produce more.
  + **Long-Run Aggregate Supply (LRAS):** Vertical at the economy's full-employment (potential) output level. In the long run, all prices (including wages) are fully flexible and adjust to changes in the price level. Therefore, the economy's potential output is determined by its resources and technology, not by the price level.
* **Shifts of SRAS (Factors of Production Costs, Productivity, Government Action):**
  1. **Resource Prices:**
     + Increase in wages or raw material prices → SRAS shifts left (decreases).
     + Decrease in wages or raw material prices → SRAS shifts right (increases).
  2. **Actions of Government:**
     + Higher taxes on businesses → SRAS shifts left.
     + Deregulation → SRAS shifts right.
     + Subsidies to businesses → SRAS shifts right.
  3. **Productivity:**
     + Increase in productivity → SRAS shifts right (lower per-unit costs).
* **Long-Run Self-Adjustment:** In the long run, if the economy is operating above or below its full employment level (e.g., due to an AD shift), sticky wages and prices will eventually adjust.
  + If unemployment is high, wages will fall, shifting SRAS right, returning to full employment.
  + If inflation is high, wages will rise, shifting SRAS left, returning to full employment.
* **Stagflation:** Occurs when SRAS shifts left (e.g., due to an oil price shock), leading to lower output (stagnation) and a higher price level (inflation) simultaneously.

### **Schools of Thought**

Economic schools of thought offer different perspectives on how the economy works and what policy interventions are appropriate.

#### **1. Classical Economics**

* **Founders/Key Figures:** Adam Smith, David Ricardo, Jean-Baptiste Say.
* **Main Beliefs:**
  + **Invisible Hand:** Markets, left to themselves, are efficient and self-regulating.
  + **Say's Law:** "Supply creates its own demand." Production generates enough income to purchase all output.
  + **Flexible Prices and Wages:** Prices and wages are fully flexible and adjust quickly to clear markets.
  + **Full Employment Equilibrium:** The economy naturally tends towards full employment in the long run. Unemployment is primarily frictional or structural.
  + **Limited Government Intervention:** Believe government intervention is generally unnecessary and can be detrimental.
* **Aggregate Supply:** Believe the LRAS is vertical (at full employment) and that AD shifts only affect the price level, not output, in the long run.
* **Creation Context:** Emerged during the Industrial Revolution, emphasizing free markets and minimal government.

#### **2. Keynesian Economics**

* **Founder/Key Figure:** John Maynard Keynes (The General Theory of Employment, Interest and Money, 1936).
* **Main Beliefs:**
  + **Markets are not necessarily self-correcting:** Especially in the short run, markets can get stuck in equilibria with high unemployment.
  + **Sticky Wages and Prices:** Wages and prices are often rigid (especially downwards) in the short run, preventing quick adjustment to full employment.
  + **Importance of Aggregate Demand:** Fluctuations in AD are the primary cause of business cycles. Insufficient AD can lead to prolonged recessions.
  + **Government Intervention is Necessary:** Advocate for active government intervention (fiscal and monetary policy) to manage aggregate demand and stabilize the economy, especially during recessions.
* **Aggregate Supply (Keynesian AS):** Often depicted as a reverse L-shaped curve or with a horizontal (Keynesian or "sticky price") segment at low output, indicating that output can increase without inflation until full capacity is reached, then becomes upward sloping and eventually vertical.
* **Creation Context:** Developed in response to the Great Depression, which challenged classical notions of self-correcting markets.

#### **3. Monetarism**

* **Founder/Key Figure:** Milton Friedman.
* **Main Beliefs:**
  + **Money Supply is Key:** Changes in the money supply are the primary determinant of changes in the price level and nominal GDP in the long run.
  + **Quantity Theory of Money:** MV=PY (Money Supply × Velocity = Price Level × Real Output).
  + **Stable Money Growth Rule:** Advocate for a stable, slow, and predictable growth of the money supply to control inflation.
  + **Limited Government Intervention:** Believe fiscal policy is ineffective and that active monetary policy can destabilize the economy. Markets are generally efficient.
  + **Long-Run Neutrality of Money:** Changes in the money supply only affect prices, not real output or employment, in the long run.
* **Aggregate Supply:** Closer to classical view, emphasizing a vertical LRAS.
* **Creation Context:** A critique of Keynesianism in the 1970s, during periods of stagflation, arguing that excessive money growth caused inflation.

#### **4. Supply-Side Economics**

* **Founders/Key Figures:** Arthur Laffer, Robert Mundell (popularized in 1980s under Reagan/Thatcher).
* **Main Beliefs:**
  + **Focus on Aggregate Supply:** Economic growth and stability are best achieved by policies that increase aggregate supply.
  + **Incentives Matter:** Emphasize policies that enhance incentives to work, save, invest, and innovate.
  + **Tax Cuts and Deregulation:** Advocate for lower marginal tax rates (especially on income and capital gains) and reduced government regulation to stimulate production and investment. (Laffer Curve suggests tax cuts can sometimes increase tax revenue by boosting economic activity).
* **Aggregate Supply:** Focus on shifting the LRAS curve to the right.
* **Creation Context:** Emerged as a response to stagflation of the 1970s, arguing that Keynesian demand-side policies were ineffective against supply shocks.

#### **5. Neoclassical Economics**

* **Overview:** Often seen as a synthesis or evolution of classical ideas, incorporating more rigorous mathematical modeling and focusing on rational agents, equilibrium, and efficiency. It forms the foundation for much of modern mainstream microeconomics and macroeconomics (with elements of both classical and Keynesian ideas, particularly the concept of a vertical LRAS in the long run and sticky prices/wages in the short run).
* **Main Beliefs:**
  + **Rationality:** Individuals and firms make rational choices to maximize utility or profit.
  + **Methodological Individualism:** Focus on individual choices as the basis for understanding aggregate outcomes.
  + **Equilibrium Analysis:** Markets tend towards equilibrium.
  + **Efficiency:** Competitive markets generally lead to efficient outcomes.
  + **Importance of Supply and Demand:** Core framework for understanding market behavior.
* **Who Made It:** Not a single founder, but developed through the late 19th and early 20th centuries by economists like Alfred Marshall, Leon Walras, Carl Menger.
* **Why It Was Created:** To provide a more formal and rigorous (mathematical) framework for economic analysis, moving beyond purely descriptive classical economics and incorporating the concept of marginal utility.