Macroeconomics is the study of the determinants & movements of such key economic variables as unemployment, inflation, interest rates, exchange rate, productivity and growth, government budget deficit/surplus, foreign trade deficit etc

Economy comes from a Greek word for **“one who manages a household**

A household and an economy face many decisions like:

Who will work?

What goods and how many of them should be produced?

What resources should be used in production?

At what price should the goods be sold?

Scarcity means that society has limited resources and therefore cannot produce all the goods and services people wish to have.

Prices rise when the government prints too much money.

Society faces a short-run tradeoff between inflation and unemployment.

**TEN PRINCIPLES OF MACROECONOMICS**

1. **PEOPLE FACE TRADEOFFS.**

We usually have to give up another thing e-g guns vs. butter, food vs. clothing, leisure time vs. work, efficiency vs. equity. Making decisions requires trading off one goal against another

**Efficiency** means society gets the most that it can from its scarce resources.

**Equity** means the benefits of those resources are distributed fairly among the members of society

**The opportunity cost** of an item is what you give up to obtain that item

1. **COST OF SOMETHING IS WHAT YOU GIVE UP TO GET IT.**

Decisions require comparing costs and benefits of alternatives

1. **RATIONAL PEOPLE THINK AT THE MARGIN**

People make decisions by comparing costs and benefits at the margin.

1. **PEOPLE RESPOND TO INCENTIVES.**

Marginal changes in costs or benefits motivate people to respond. The decision to choose one alternative over another occurs when that alternative’s marginal benefits exceed its marginal costs!

1. **TRADE CAN MAKE EVERYONE BETTER OFF**

People gain from their ability to trade with one another. Competition results in gains from trading. Trade allows people to specialize in what they do best.

1. **MARKETS ARE A GOOD WAY TO ORGANIZE ECONOMIC ACTIVITY**

A market economy is an economy that allocates resources through the decentralized decisions of many firms and households as they interact in markets for goods and services e-g

• Households decide what to buy and who to work for.

• Firms decide who to hire and what to produce.

1. GOVERNMENTS CAN SOMETIMES IMPROVE MARKET OUTCOMES

**Market failure** occurs when the market fails to allocate resources efficiently. When the market fails (breaks down) government can intervene to promote efficiency and equity.

Market failure may be caused by:

• An externality, which is the impact of one person or firm’s actions on the well- being of a bystander.

• Market power, which is the ability of a single person or firm to unduly influence market prices.

1. **THE STANDARD OF LIVING DEPENDS ON A COUNTRY’S PRODUCTION**

Almost all variations in living standards are explained by differences in countries’ productivities. **Productivity** is the amount of goods and services produced from each hour of a worker’s time. Standard of living may be measured in different ways:

• By comparing personal incomes.

• By comparing the total market value of a nation’s production.

1. **PRICES RISE WHEN THE GOVERNMENT PRINTS TOO MUCH MONEY**

Inflation is an increase in the overall level of prices in the economy. One cause of inflation is the growth in the quantity of money. When the government creates large quantities of money, the value of the money falls.

1. **SOCIETY FACES A SHORT-RUN TRADEOFF BETWEEN INFLATION AND UNEMPLOYMENT**

The Phillips Curve illustrates the tradeoff between inflation and unemployment:

as inflation decreases, unemployment increases. It’s a short-run tradeoff

**IMPORTANT ISSUES IN MACROECONOMICS**

• Why does the cost of living keep rising?

• Why are millions of people unemployed, even when the economy is booming?

• Why are there recessions?

• Can the government do anything to combat recessions? Should it??

• What is the government budget deficit? How does it affect the economy?

• Why do the economies have such a huge trade deficit?

• Why are so many countries poor?

• What policies might help them grow out of poverty**?**

The market is **competitive** i-e each buyer and seller is too small to affect the market price.

**The demand curve** shows the relationship between quantity demanded and price, other things equal. The demand curve shows that there is an inverse relationship between quantity demanded and price.

**Demand equation can be written as: Qd = D (P, Y)**

**The supply curve** shows the relationship between quantity supplied and price, other things equal. The supply curve shows that there is positive relationship between quantity supplied and price

**Supply equation** i-e QS = S (P, Ps).

The upward sloping supply curve and downward sloping demand curve give rise to equilibrium.

**An increase in income** increases the quantity of cars consumers demand at each price which increases the equilibrium price and quantity.

**An increase in price of steel** (Ps) reduces the quantity of cars producers supply at each price which increases the market price and reduces the quantity.

**Endogenous variable** is a variable that is identified within the workings of the model. Also termed a dependent variable, an endogenous variable is in essence the "output" of the model. **Exogenous variable** is a variable that is identified outside the workings of the model. Also termed an independent variable, an exogenous variable is in essence the "input" of the model. The values of endogenous variables are determined in the model whereas the values of exogenous variables are determined outside the model. In the model of supply & demand for cars: **Endogenous variables are: P, Qd, Qs Exogenous variables are: Y, Ps**

**Flexible prices** mean that prices adjust in the long run in response to market shortages or

surpluses. This condition is most important for long-run macroeconomic activity and long-run

aggregate market analysis.

**Sticky prices** mean that some prices adjust slowly in response to market shortages or

surpluses. This condition is most important for macroeconomic activity in the short run and

short-run aggregate market analysis.

Prices tend to be the **most sticky** in resource markets, especially labor markets, and the **least sticky** in financial markets, with product markets falling somewhere in between.

**Market clearing** is an assumption that prices are flexible and adjust to equate supply and

demand. In the short run, many prices are sticky i.e.; they adjust only sluggishly in response

to supply/demand imbalances

**GROSS DOMESTIC PRODUCT (GDP)** Gross Domestic Product is the total market value of all goods and services produced within the political boundaries of an economy during a given period of time, usually one year. This is the government's official measure of how much output our economy produces

1. Used goods are NOT included in the calculation of GDP.
2. Treatment of inventories depends on if the goods are stored or if they spoil.
3. Intermediate goods are not counted in GDP– only the value of final good
4. Some goods are not sold in the marketplace and therefore don’t have market prices. We

must use their imputed value as an estimate of their value. For example, home ownership and government services.

Apt Rent will be included in GDP e-g your expenditure and landlord’s income.

What about people who own houses? They pay themselves their rent.

What about services of police officers, firefighters and senators? All public goods and

services. These are all included in GDP

**VALUE ADDED** of a firm equals the value of the firm’s output less the value of the intermediate goods the firm purchases.

**Nominal GDP** is the value of final goods and services measured at current prices.

Nominal GDP Y = P × y, Where P is the price level & y is real output.

**Real GDP** is the value of goods and services measured using a constant set of prices.

Hence, real GDP y = Y/P

**GDP DEFLATOR The GDP** deflator, also called the implicit price deflator for GDP, measures the price of output relative to its price in the base year. It reflects what’s happening to the overall level of prices in the economy.

GDP Deflator = Nominal GDP / Real GSP × 100

COMPONENTS OF EXPENDITURES Y = C + I + G + NX

Y =>Total Demand for domestic

C => Consumption Spending by Households

I => Investment spending by businesses and households

G => Govt. purchases of goods and services

NX=> Net exports or net foreign demand

**Capital** is one of the factors of production. At any given moment, the economy has a certain overall stock of capital. While **investment** is spending on new capital.

Stock: A variable or measurement that is defined for an instant in time (as opposed to a period of time). A stock can only be measured at a specific point in time.

Flow: A variable or measurement that is defined for a period of time (as opposed to an instant in time). A flow can only be measured over a period.

NET EXPORTS (NX = EX - IM)

The value of total exports (EX) minus the value of total imports (IM)

**Gross National Product (GNP)** Gross National Product is the total market value of all goods and services produced by the citizens of an economy during a given period of time, usually one year. **Gross Domestic Product (GDP)** Gross Domestic Product is the total market value of all goods and services produced within the political boundaries of an economy during a given period of time, usually one year.

(GNP–GDP) = (Factor payments from abroad) minus (Factor payments to abroad

Net National Product (NNP) It is GNP adjusted for depreciation. NNP = GNP – Depreciation

National Income (NI) NI = NNP – Indirect Business Taxes

Personal Income (PI) = NI – Corporate Profits – Social Insurance Contributions – Net Interest + Dividends + Govt. transfers to Individuals + Personal Interest Income

Disposable Personal Income (DPI) = PI – Tax

**CPI** is a measure of the overall level of prices

REASONS WHY THE CPI MAY OVERSTATE INFLATION

• Substitution bias:

• Introduction of new goods:

• Unmeasured changes in quality





**Okun’s Law states** that a one-percent decrease in unemployment is associated with two percentage points of additional growth in real GDP