Course: Economics (HS 101)
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Instructors
Pushpa Trivedi (Microeconomics)

Neha Gupta (Macroeconomics)

SLIDES ADAPTED FROM Samuelson and Nordhaus, and Mankiw

Ten Principles of Economics

A: The principles of decision making

B: The principles of interactions among people

C: The principles of the economy

A: The principles of decision making

1. People face tradeoffs.
2. The cost of any action is measured in terms of foregone opportunities.
3. Rational people make decisions by comparing marginal costs and marginal benefits.
4. People respond to incentives.

B: The principles of interactions among people

5. Trade can be mutually beneficial.
6. Markets are ***usually*** a good way of coordinating trade.
7. Govt. can potentially improve market outcomes if there is a market failure or if the market outcome is inequitable.

C: The principles of how the economy works.

8. A Country's Standard of Living Depends on Its Ability to Produce Goods and Services.

9. Money growth is the source of inflation.

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

What kinds of questions does economics address?

Economics offers many insights about the behavior of people, markets, and economies (Ten Principles of Economics: Mankiw)

1. What are the principles of how people 'make decisions'? (First 4 principles)
2. What are the principles of how people 'interact'?(next 3 principles)
3. What are the 'principles of how the economy as a whole works'? (next 3 principles)

Economics is the study of how society manages its scarce resources, including

1. how households decide on work-leisure, expenditure-savings, what to buy and what not to buy
2. how firms decide what to produce, how much to produce, how to produce, combinations of labour –capital ratios, technology to be used, etc.
3. how society decides how to divide its resources across production of various goods and services in the light of environmental degradation.
4. How a country interacts with the rest of the world

A: HOW PEOPLE MAKE DECISIONS

Principle #1: People Face Tradeoffs

- Society faces an important tradeoff:

  efficiency vs. equity

- **efficiency**: getting the most out of scarce resources
- **equity**: distributing prosperity fairly among society's members
- Tradeoff: To increase equity, can redistribute income from the well-off to the poor.
  But this reduces the incentive to work and produce, and shrinks the size of the economic "pie."

Principle #2: There are no Free Lunches! (Kuch Paane ke Liye Kuch Khona bhi Padta hai!)

- 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

- A person is **rational** if (s)he systematically and purposefully does the best (s)he can to achieve his/her objectives.
- Many decisions are not "all or nothing," but involve comparing **marginal benefits with marginal costs**

Principle #4: Rational People Respond to Incentives

- **Incentive:** something that induces a person to act, *i.e.* the prospect of a reward or punishment (negative of incentives).
- Rational people respond to incentives because they make decisions by comparing costs and benefits.
- Examples:
  - Savings in response to tax exemptions
  - Treating private property differently than public property
  - Better performance with bonus incentives

B: HOW PEOPLE INTERACT

Principle #5: Trade Can Make Everyone Better Off

- Rather than being self-sufficient, people can specialize in producing one good or service and exchange it for other goods.
- Countries also benefit from trade & specialization (BPOs):
  - get a better price abroad for goods or services they produce (higher wages for labour from India)
  - buy other goods/services more cheaply from abroad than could be produced at home (pay lower wages to Indians as compared to Americans

Principle #6: Markets (invisible hand) Are Usually A Good Way to Organize Economic Activity under certain conditions (absence of externalities and market imperfections)

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- "Organize economic activity" means determining (Capitalist mode of production)
  - what goods to produce
  - how to produce them
  - how much of each to produce
  - who gets them

- The invisible hand works through the price system:
  - The interaction of buyers and sellers determines prices of goods and services.
  - Each price reflects the good's value to buyers and the cost of producing the good.
  - Prices guide self-interested households and firms to make decisions that, in many cases, maximize society's economic well-being.

Principle #7: Governments Can Sometimes Improve Market Outcomes

- Important role for govt: enforce property rights (with police, courts), maintain law and order, no interference with economic activity
- People are less inclined to work, produce, invest, or purchase if large risk of their property being damaged.
  - Tata Nano shifted from West Bengal.
  - music companies insisting that governments does not allow pirated copies of their music CDs

Principle #7: Governments Can Improve Market Outcomes when markets fail.

- Govt may alter market outcome to promote efficiency only if there is no market failure (MF).
- **market failure**, when the market fails to allocate society's resources efficiently.
- Causes of MF: **externalities**, when the production or consumption of a good affects bystanders (*e.g.* pollution); **market power**, a single buyer or seller has substantial influence on market price (*e.g.* monopoly)
- In such cases, public policy may increase efficiency.

- Govt may alter market outcome to promote equity
- If the market's distribution of economic well-being
  is not desirable, tax or welfare policies can change how the economic "pie" is divided.

C: HOW THE ECONOMY AS A WHOLE WORKS

Principle #8: A Country's Standard of Living Depends on Its Ability to Produce Goods and Services

- Huge variation in living standards across countries and over time:
  - Average income in rich countries is more than ten times average income in poor countries. USA PCI almost 50 times of that of India (atlas method) and 17 times that of India (PPP method)

- The most important determinant of living standards: **productivity**, the amount of goods and services produced per unit of labor.
- Productivity depends on the equipment, skills, and technology available to workers.

Principle #9: Prices rise when the government prints too much money.

- **Inflation**: increases in the **general** level of prices.
- In the long run, inflation is almost always caused by excessive growth in the quantity of money in relation to growth in production of goods and services, the greater is the inflation rate.

Principle #10: Society faces a short-run tradeoff between inflation and unemployment

- In the short-run (1 – 2 years), many economic policies push inflation and unemployment in opposite directions.

- Other factors can make this tradeoff more or less favorable, but the tradeoff is present.

Definitions of Economics

- The earlier term for 'economics' was political economy.
- Adam Smith: An Inquiry into the Nature and Causes of the Wealth of Nations
- Alfred Marshall: a study of mankind in the ordinary business of life
- Lionel Robbins: a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses. (unlimited wants and scarce resources)

Chapter 1: Fundamentals of Economics

i) Introduction

ii) The three problems of economic organization

iii) Society's technological possibilities

i) Introduction

- Why study economics
- Definition of economics
- Two central ideas in definition of economics
- Major branches of economics
- The logic of economics
- Objectives of economics and how to achieve the same

Why study economics?

- As an entrepreneur/ manager/ industrialist/ technocrat, you will be required to take decisions based on market reality (which inputs to use, what technology to use, what output to produce, from where to mobilize resources, where to sell, etc.).
- Understanding of facts and taking decisions in day to day life.
- Without the knowledge of economics, dice of life are loaded against you!-Samuelson

Definition of Economics:

- Economics is the study of how societies use their scare resources to produce valuable (economic) good and distribute them among different consumers.

Two central ideas in definition of economics:

- **Scarcity** of resources and unlimited desires. Economic problem arises because of scarcity

- **Efficiency**: Hence, prioritization of wants becomes necessary and using resources in most efficient manner (production aspect) so that maximum satisfaction (consumption aspect) can be derived from them. Efficiency is reached in an economy when it cannot make anyone better off without making someone else worse off (Pareto optimum).

– Economic goods are scare or limited in supply.
– Scarcity can be overcome partly by efficiency.

Two major Branches of Economics

- Microeconomics (study of a part of the economy)
- Macroeconomics (study of the entire economy)
  - Closed economy macroeconomics (no economic exchanges of the domestic economy with the rest of the world)
  - Open-economy macroeconomics (domestic economy linked through trade of goods and services and capital inflows)

Examples of problems studied in microeconomics:

- How price of a commodity is determined.
- How consumers allocate their budget for purchases of different goods
- How firms allocate their resources for production of different goods.

Macroeconomics:

- J.M. Keynes wrote the book titled ‘The *General Theory of Employment, Interest and Money’* in 1936.
- Major contribution to the area of macroeconomics

Microeconomics

- Adam Smith: Father of Economics, wrote the book titled 'An enquiry into the Nature and Causes of the Wealth of Nations (1776). Basically dealt with microeconomics and how market mechanism can bring maximum efficiency in an economy. He also advocated minimum intervention by the state in economic activity. According to him, governments should look after law and order situation and this should be financed from taxation, in other words, the governments should follow the principle of balanced budgets. They should allow market principles to rule in determining production, distribution and consumption.

Major approaches to economics

- Positive Economics: Describes and presents facts
- Normative Economics: Deals with prescriptions as to what should be done.
- Difference: facts vs fairness

The logic of economics

- Scientific approach to understand economic realities
  - Observation of reality (data collection, cross-section, time-series)
  - Use of analytical tools (statistical and mathematical methods), Use of mathematics and statistics in solving economic problems: Optimization techniques, regression and time-series analysis, macromodelling (econometrics)
  - Theoratical frame and constructs
  - Inference
- Fallacies/pitfalls in economic reasoning

Fallacies/pitfalls in economic reasoning

- The *post hoc* fallacy
- Failure to hold other things constant (ceteris paribus)
- Fallacy of composition

The post hoc fallacy:

- Mistaking temporal (time) sequence for causation. If we hold an event responsible for the other one that follows it, we commit the post hoc fallacy, *e.g.*, if prices fall after an increase in money supply, the former cannot be held responsible for the latter. Prices may have fallen due to increased availability of goods. Temporal sequencing should be distinguished from causal relationships.

Failure to hold other things constant:

- Partial and general equilibrium framework: impact of change in a variable on the economic system can be analyzed only if we can incorporate controls on the other variables.

Fallacy of composition:

- Whatever is true for a sub-system (an individual economic agent) may not be true for the entire system (a group of individuals). If an individual gets a hike in pay her/his purchasing power increases, even if total production in the economy does not increase. However, if everyone's pay is hiked, and production does not increase then it is unlikely that everybody's purchasing power will increase. In such a situation, only prices will increase.

Objectives of economics

- Improvement in standard of living, making more commodities and services available for consumption for every human being (economic growth).
- Bringing about a change in the structure of the economy (economic development)
- Conflict with nature and environment and hence the concept of sustainable development, improving the standard of living of the present generation without compromising on the needs of the future generations.

Which Economic and Political System to follow so as to achieve these Objectives

- Which economic system to follow? (Two polar systems)
  - Capitalism (rule of markets)
  - Command Economy (Rule of the government)
- Role of Government (state) vs Markets in solving socio-economic problems:
  - Economic systems: Command economy, capitalism, mixed economy, etc.
  - Political systems: democracy, dictatorship, communism, socialism, welfare state, etc.

- Utopia (dream about the ideal situation) vs Realism: Necessary to understand the selfish instinct in human beings. Failure of communism and socialism due to utopian ideas rather than reality. Human beings need incentives for increasing production. A judicious combination of state and market required.

ii) Problems of Economic Organization

- What to produce (allocation of resources to rival uses)
- How to produce (Choice of technology and efficiency)
- For whom to produce (Distribution *via* state or market)

Economic Systems

- Market Economy: Laissez-faire (no interference of government in economic matters of production, consumption and distribution. These are determined by the market. It is the law of demand and supply which are supposed to ensure equilibrium in the market.
- Command Economy: All economic matters are decided by the government. No individual freedom in economic matters.
- Mixed Economy: Both government and private sectors co-exist. Those activities which may not be necessarily profitable but are considered to be essential for welfare of societies are provided by the state. Govts may also participate
- No Economic systems can be pure systems in the long run.

iii) Society's technological possibilities

- Production Possibility Frontier
  - Inputs
  - Techonolgy
  - Output

Inputs:

- Raw materials and factor inputs
- Raw materials: which need to be processed by factor inputs. Value added = value of output – value of raw materials

- Factor inputs: Land, labour, capital and enterprise (managerial skills). Factors of production add value to raw materials (value addition)

Outputs: commodities and services

- Commodities or goods/bads
- Services
- Free good vs Economic Good
- Free good is available without payment of a price because the good is not scarce in supply and hence no market exists for a free good.
- Economic good: Due to scarcity of resources, there is a competition to get the resources and produce a good which cannot be supplied at zero price. Such goods are called economic goods for which cost of production and price is positive.

Production Possibility Frontier (PPF):

- Combinations of goods that can be most efficiently produced with given resources.
- Frontier indicates maximum efficiency. Any point below the frontier indicates inefficiency. Scarcity of resources implies trade-off between production of various goods.
- Most common shape of the PPF: Concave to the origin (increasing marginal rate of technical substitution).

- PPF shifts
- Poor Frontier vs Rich urban society
- Before investment vs after investment
- Outdated technology vs advanced technology

No free lunches! (Scarcity)

- Trade-off (to get something in return for getting something else)
- Opportunity cost of a decision is the opportunity given up or sacrificed
- PPF indicates trade-off or the opportunity cost. In a world of scarcity, choosing one alternative means foregoing some other alternative. The opportunity cost of a decision is the value of the good or service foregone.

Efficiency:

- Productive or technical efficiency: When an economy cannot produce more of a good without producing less of another good. In this situation, the economy will be on the PPF. If some resources are unemployed then economy will be operating at some point inside the PPF boundary. The distance from the boundary will indicate the extent of inefficiency prevailing in an economy.