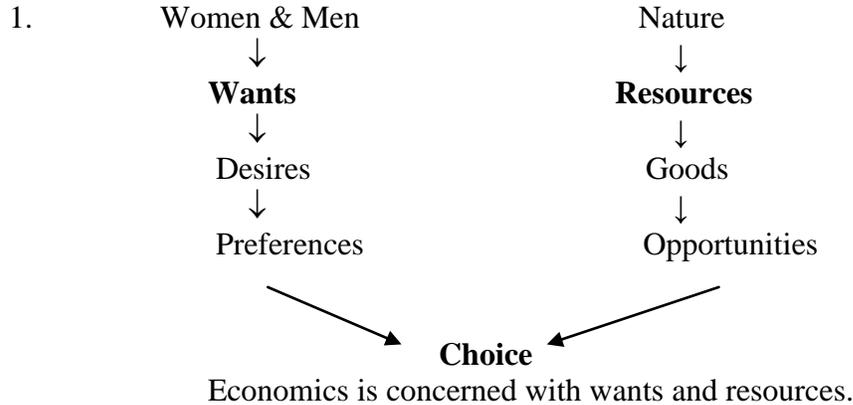


Econ. 1A **Getting Started: What is Economics? Economic Way of Thinking**

What is Economics?



2. Resources are **limited**, but wants are **unlimited**. \Rightarrow wants $>$ resources available \Rightarrow **scarcity** \Rightarrow faced with scarcity, we must choose among the **available alternatives** \Rightarrow choice \Rightarrow the choices that we make depend upon the **incentives** that we face \Rightarrow an incentive is a reward that encourages an action or a penalty that discourages one \Rightarrow **Economics is the science of choice.**
3. Economics is a social science that studies choices that individuals, businesses, governments, and entire societies make as they **cope** with **scarcity** and the **incentives** that influence those choices and the **arrangements** that coordinate them.
4. The subject of economics is divided into two main parts: microeconomics and macroeconomics

Microeconomics is the study of the choices that individuals and businesses make, the way these choices interact in markets, and the influence of governments.

Macroeconomics is the study of the aggregate (or total) effects on the national economy and the global economy of the choice that individuals, businesses and governments make.

5. **Two big economic questions**

- (A) How do choices end up determining **what, how** and **for whom** goods and services are produced?

Goods are physical objects satisfy human wants.

Services are tasks performed for people such as auto-repair service and cell-phone service.

(i) **What** goods and services are produced?

Example:

| | Agriculture | Manufacturing | Services |
|-------|-------------|---------------|----------|
| China | 10% | 50% | 40% |
| US | 1% | 20% | 79% |

(ii) **How?** Goods and services are produced by using **productive resources** (factors of production)

Factors of productions

- (a) **Land (N)**: gifts of nature that we use to produce goods and services. Land is natural resources such as minerals, oil, gas, coal, water, air, forests and fish.
- (b) **Labor(L)**: the **work time** and **work effort** that people devote to producing goods and services. It includes the physical and mental efforts. **Human capital** (the quality of labor) is the knowledge and skill that people obtain from education, on-the-job training, and work experience.
- (c) **Capital (K)**: the tools, instruments, machines, buildings, and other constructions that businesses use to produce goods and services. **Financial capital** is not capital.
- (d) **Entrepreneurship (E)**: the human resource that organizes labor, land and capital.

(iii) **For whom?** Who consumes the goods and services that are produced depends on the incomes that people earn. People earn their incomes by selling the services of factors of production they own.

- (a) Land earns **rent**.
- (b) Labor earns **wages**.
- (c) Capital earns **interest**.
- (d) Entrepreneurship earns **profit**.

| Wages | Interest | rent | profits |
|-------|----------|------|---------|
| 72% | 11% | 3% | 14% |

(B) When do choices made in the pursuit of *self – interest* promote *the social interest*?

Self-interest: A choice is in yours self-interest if you think that choice is the best one available to you.

Choice Rule: People compare the expected benefit and cost of available opportunities before they act and they take the action, which they think will yield them the largest net benefit.

Maximum net benefit = Benefit – Cost,
when Marginal benefit = marginal cost.

Social- interest: Self-interested choices promote the social interest if they lead to an outcome that is the best for the society as whole – an outcome that uses resources **efficiently** and distributes the goods and services **fairly** among individuals.

Resources are used efficiently when goods and services are produced,

- (1) at the lowest possible cost, and
 - (2) in the quantities that gives the greatest possible benefit.
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Big Question: How can we organize our economic lives so that when each one of us makes choices that are in our self-interest, it turns out that these choices also promote the social interest?

- (1) According to Adam Smith's **An Inquiry into the Natures and Causes of the Wealth of Nations (1776)**. He laid out the basic principles of a **market economy** and believed that
 - (a) The economic system is harmonious and requires minimum of government interference.
 - (b) Each individual was motivated by *self-interest*; they each acted for the good of the whole, guided by *invisible hand* and made possible by *the free play of competition*.
 - (c) *Free competition* was the essential ingredient of the efficient economy.
- (2) *Self-interest may have side effects that may harm social-interest*, i.e., the individual pursuit of self-interest found in the markets makes society worse off. We call this **market failure**.

Example:

Traffic congestion: a commuter driving to work has no incentive to take into account the cost that his act inflicts on other drivers in the form of increase traffic congestion.

When markets don't achieve efficiency, government intervention can improve society's welfare. For example, there are several possible remedies to traffic congestion: Setting car pool lane, charging road toll, subsidizing the cost of public transportation, or taxing sales of gasoline to individual drivers. All these remedies work by changing the incentives of would be drivers – motivating them to drive less and use alternative transportation.

Some current big questions related to self-interest and social interest with scarcity:

- (a) **Globalization and international outsourcing.** Globalization brings expanded production and job opportunities for Asian workers, it destroys many American jobs.

- (b) **The information-age economy.** Would the social interest be better served if Microsoft and Intel had faced competition from other firms?
- (c) **Climate change.** Each day, when we make self-interested choices to use electricity and gasoline, we contribute to carbon emission and global warming. Must government change **the incentives** we face so that our self-interested choices advance the social interest?
- (d) **Government budget deficit and debt.**
 Budget deficit (= government expenditure – tax revenue > 0). Every year since 2001, US government has run a budget deficit, on average, \$1.6 billion a day. This leads to an increase in government debt by \$6.85 trillion from 2002 to 2013, i.e., an increase of personal share of this debt by \$22,000. [A debt is the sum of money a government owes at a particular point in time.]
Deficits and the debts cannot persist indefinitely, and debts must somehow repaid by our sons or daughters. When we make our voter choices, we pursue our self-interest. Do our choices damage the social interest?

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Economic Way of Thinking (The economic approach about the choices that must be made to cope with scarcity.)

6. The economic way of thinking with **six** core ideas:

- (1) **A choice is a tradeoff:** A tradeoff is an exchange, i.e., giving up one thing to get something else.
 - (2) **Cost (what we must give up): The opportunity cost** of something is the best thing we must give up to get it. It is the highest valued alternatives that we must give up to get it.
 - (3) **Benefit (gain measured by what we are willing to give up):** The benefit of something is the gain or pleasure that it brings.
 - (4) **Rational choices:** A choice that uses the available resources to obtain the maximum net benefit. Net benefit = Benefit – cost.
 - (5) **Choosing at margin:** *when a choice is changed by a small amount or by a little at a time, the choice is made at the margin.*
- (i) People make choice by comparing the benefit and cost of available opportunities before they act and they take the action, which they think will yield them **the largest net benefit**.
 - (ii) To make the choice decision, you compare the marginal benefit (MB) and the marginal cost (MC), and choose the one when the marginal benefit = the marginal cost, i.e., MB = MC, which gives **the maximum net benefit**.

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Marginal benefit (MB) is what you gain when you get one more unit of something. It is measured by what you are willing to give up to get one additional unit of it.

Marginal cost (MC) is the opportunity cost of one unit increase in an activity. It is what you must give up to get one additional unit of it.

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- (6) **Responding to incentives:** Incentive is a reward or a penalty – a “carrot” or a “stick” – that encourages or discourages an action. When we make choices, we respond to incentives. A change in MB or a change in MC changes the incentives we face and leads us to change our choice.

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Example: Making a rational choice

Will you go to movies for third times in a week? The answer is found by comparing MB and MC.

- (1) If $MB > MC$, seeing the third movie adds more to benefit than to cost. Your NB increases, so your choice is to see the third movie.
- (2) If $MB < MC$, seeing the third movie adds more to cost than to benefit. Your NB decreases, so your choice is to spend the evening studying.
- (3) When $MB = MC$. Your NB will be at maximum. The choice is rational and it is not possible to make a better choice. Scarce resources are being used in the best possible way.

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7. Economics as **social science**

The objective of economics is to discover and explain the basic principles (theories) that govern our economic life. To achieve this goal, Economists seek to *discover* how the economic world works. In pursuit of this goal they distinguish between two types of statements:

- (1) **Positive statements** are about **what is**. They say what is currently believed the way the world operates. For example:
 - (i) “Our planet is warming because of the amount of coal that we are burning”;
 - (ii) “A rise in the minimum wage will bring more teenage unemployment.”These statements may be right or wrong, and it can be tested.
- (2) **Normative statements** are about **what ought to be**. These statements depend upon values and cannot be tested. For example,
 - (i) “We ought to cut back on our use of coal”;
 - (ii) “The minimum wage should not be increased”.These statements express **an opinion**, but they don’t assert a fact that can be checked. **They are not economics.**

(3) **Unscrambling cause and effect.** Economists are interested in **positive statements** about *cause* and *effect*. For example,

- (i) Are computers getting cheaper because people are buying them in greater quantities?
- (ii) Are people are buying computers in greater quantities because they are getting cheaper?
- (iii) Is some third factor causing both the price of a computer to fall and the quantity of computers to increase?

To answer questions such as these economists **create** and **test** economic models.

Creation

An **economic model** is a description of some aspect of the economic world that includes **only those features** that are needed for the purpose at hand. It is **simpler** than the reality it describes.

Test

To check an economic model against the facts, economists use three approaches: (1) natural experiments, (2) statistical investigations, and (3) economic experiments

8. Economics as policy tool

Economics is useful. It is a toolkit for making decision. Economics provides a way of approaching problems in all aspects of our lives. Here we focus on three areas:

(i) Personal economic policy

When we make individual decision, for example,

“how should I allocate my time between studying economics or accounting?” or
“should I quit school after getting a BA degree or should I go for a master’s or a professional qualification?”

It involves MB and MC. If we know MB and MC, we will make more solid decisions.

(ii) Business economic policy

When a company makes business decision, for example,

“should Sony make only flat panel TV and stop making conventional ones?”

It involves the evaluation of MB and MC. If the company uses the tool of MB and MC analysis, it will make better decisions.

(iii) Government economic policy

When governments make policy decision, for example,

“how can California balance its budget?” or

“should the federal government cut taxes or raise taxes?”

It involves the evaluation of MB and MC. If governments apply the tool of MB and MC analysis, it will make better decisions.