

Unit - I

INTRODUCTION TO MICRO ECONOMICS

The world's biggest economies in 2018 (195 nations)

These are the world's biggest economies

Based on data from the International Monetary Fund, 2018

Country	Value (in trillions)
1 United States	20.4
2 China	14
3 Japan	5.1
4 Germany	4.2
5 United Kingdom	2.94
6 France	2.93
7 India	2.85
8 Italy	2.18
9 Brazil	2.14
10 Canada	1.8

Source: IMF

Economic Interpretation

S. No.	Ordinary way	Economic way
1	India as a country	Indian Economy
2	Geographical size (2.4 % land area) & Population (17.7 % of global population)	Economy size (6 th rank)
3	Political system - Democracy	Economic system – Mixed economic system

Language of Economics

S No.	Economic agents / Economic units	Economic Activities	Economic System
1	Consumer / Individuals / Households	Consumption	Economic activities are governed by the economic system in an economy and economic system is governed by economic policies
2	Producer / Firms	Production	
3	Government	Exchange / Distribution	

Economic agents faces the problem of scarcity

Language of Economics

➤ **Economy** – An area in which people make or produce goods & services – Indian Economy

➤ **Economic agents** – Firms, households, government

Economic activities:

➤ Production – An activity designed to satisfy peoples' want – Done by producers

➤ Consumption – Using up goods & services to satisfy our wants – Done by consumers

➤ Distribution/Exchange – Buying & selling of goods & services

➤ **Resources** - All the scarce material is called resources (Free vs Economic resources) – Land, Labour, Capital, Gold, Crude oil

Concept of economics

Economics relates to:

1. **Economic activities** – Production, Consumption, Exchange (product & factor pricing)
2. **Economic system** – Capitalism, Socialism, Mixed Economy
3. Economic policies – Monetary, Fiscal, Trade

Review question

- Watching a movie is an example of “consumption.”
- True

Why study economics?

1. To learn economic way of thinking:
 - a. People responds to incentives – Self interest

Self-interest in the Social Interest

- A choice is in your **self-interest if you think that choice** is the best one available for you.
- A choice is in the **social interest if it leads to an outcome** that is the best for society as a whole.
- The social interest has two dimensions: efficiency and equity (or fairness).
- What is best for society is an efficient and fair use of resources.

Big Question

- Now let's ask whether we can organize our economic lives so that when each one of us makes a choice in our self-interest, we actually promote the social interest.
- Can trading in free markets achieve this social interest?
- Do we need government action to help achieve the social interest?
- Do we need international cooperation and treaties to help achieve the social interest?

Examples

- Questions about the social interest are hard ones to answer and they generate a lot of discussion, debate and disagreement.
- Let's take a closer look at these questions with two examples:
 1. Globalization
 2. The information-age economy

Globalization

- Globalization is in the self-interest of consumers because they can buy low-cost goods and services produced in other countries.
- It is also in the self-interest of the multinational firms that produce in low-cost regions and sell in high-price regions.
- **But is globalization in the self-interest of the low-wage workers in India who are sewing the sequins on your low-cost top or in the interest of displaced clothing workers in London? Is it in the social interest?**

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- While globalization brings expanded production and job opportunities for some workers, it also destroys jobs.
 - New jobs in India means workers in Europe's clothing manufacturing industries must learn new skills, take lower-paid service jobs or retire earlier than previously planned.

The Information-age Economy

- The Information Revolution has clearly served your self-interest: it has provided your mobile phone, laptop, the latest applications and the Internet.
- It has also served the self-interest of Bill Gates of Microsoft and Gordon Moore of Intel, both of whom have seen their wealth soar.

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- But did the Information Revolution best serve the social interest?
 - Did Microsoft produce the best possible Windows operating system and sell it at a price that was in the social interest?
 - Did Intel make the right quality of microchips and sell them in the right quantities at the right prices?
 - Was the quality too low and the prices too high?
 - Would the social interest have been better served if Microsoft and Intel had faced competition from other firms?

Microchips and Windows

Gordon Moore, who founded the chip-maker Intel, and Bill Gates, a co-founder of Microsoft, held privileged positions in the *Information Revolution*.

For many years, Intel chips were the only available chips and Windows was the only available operating system for the original IBM PC and its clones. The PC and Apple's Mac competed, but the PC has a huge market share. An absence of competition gave Intel and Microsoft the power and ability to sell their products at prices far above the cost of production. If the prices of microchips and Windows had been lower, more people would have been able to afford a computer and would have chosen to buy one.

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- b.** Optimal decisions are made at margin
 - c.** NO free lunch – It is impossible to get something for nothing - Efficient markets
 - d.** A choice is trade-off (opportunity cost)
 - e.** People make rational choices
 - f.** Ceterius paribus – Other things remaining constant/same

Other reasons

1. To understand society – Rich vs poor nations, New innovations and jobs (facebook, youtube, e-commerce)
 - Most of the nation's and world's significant social problems have an economic dimension
2. To understand current global affairs – Ex- Barbie doll Made in China, Greece crisis, India & China's role in world economy
3. To be an informed citizen – Recession after 2008, understanding government policies, fuel prices, rupee depreciation against dollar etc.
4. Choosing your life's occupation – You will know why you are unemployed?
5. It is a subject of inquiry – Develops good analytical skills and problem solving skills - **Noble prize in Economics**

Disclaimer - Economics will not make you a genius.

1.1 Economics – An Introduction

- The word ‘Economics’ was derived from the Greek words ‘Oikos’ (a house) and ‘Nemein’(to manage), which meant managing a household, using the limited money or resources a household has.

Origin of Economics

- Earlier, it used to be called as **Political Economy**.
- The early writers used the term “Political Economy” for the management of the State.
- Indian scholar and philosopher, *Chanakya (Kautilya)* in his famous book ‘*Arth-Shastra*’ has examined both kinds of activities, i.e. economics and political.
- Greek philosopher *Aristotle* had used the term economics to mean the management of ‘*family and the state*’.
- Dr. Marshall was the first to use the term ‘economics’ in 1890 in his famous work “*Principles of Economics*”.

Development of Economics as a subject

- *Adam Smith*, the *Founder of Modern Economics*, shaped the form in which we study economics today.
- His famous book “*An Enquiry into the Nature and Causes of Wealth of Nations*”, published in 1776, is still acclaimed even today.
- Till the end of 18th and the mid of the 19th century (1776 – 1850), several great Economists like *Ricardo*, *Malthus*, *J. B. Say*, etc., had fully supported the thoughts of *Adam Smith*. These economists are known as **classical economists**.

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- From the middle of 19th century to the first three decades of the 20th century (1850-1930) economists like *Menger, Walras, Cournot, Marshal, Pigou*, etc., had made significant contributions to the development of the study of Economics. **(Neo-classical economists)**
 - In 1933, Prof. *Ragnar Frisch*, a famous economist of Oslo University, Norway, divided the study of economics into two parts:
 - i) Micro Economics, and
 - ii) Macro Economics

Scope of economics

- a. **Microeconomics:** Concerned with the behavior of individual entities such as markets, firms and households.
 - Microeconomics is about decision making by individual consumers & firms, and about how resources are priced and allocated through markets

- b. **Macroeconomics:** Concerned with the overall performance of the economy.
 - This concept came into being after 1935 when *General Theory of Employment, Interest and Money* was published by John Maynard Keynes.

Scope of Microeconomics

1. Theory of consumer behaviour
2. Theory of Production and Cost
3. Theory of Factor Pricing
4. Theory of Economic Welfare

Scope of Macroeconomics

1. Theory of income and employment
2. Theory of consumption & investment
3. Theory of business cycles
4. Theory of general price level
5. Theory of economic growth
6. Theory of international trade

Difference

Basis	Micro Economics	Macro Economics
Unit of Study	Individual	Aggregate
Method	Slicing	Complete
Subject Matter	Study of product and factor pricing	Study of National income, general level of prices, business cycle
Basis	Based on independence	Based on interdependence
Core of study	Price Theory	Income
Advocated by	Alfred Marshall	John Maynard Keynes
Vision	Worms eye view : study of a tree	Birds eye view: Forest as a whole
Approach	Individualistic	Aggregative
Objective	Allocation of resources	Full emp. & growth
Quality of Analysis	Simple and easy	Difficult and complicated

Complementarity of two approaches

- To quote Paul Samuelson; “There is really no opposition between Micro and Macro-economics. Both are absolutely vital. You are less than half educated if you understand the one while being ignorant of the other”.

Examples

- What determines the production of **DVDs**?
- What factors determine the price of **petrol**?
- What determines the wage of **auto workers**?
- Why are people buying more **mobile phones**?
- What causes the **inflation** rate to move higher?
- Why did **unemployment** increase in 2008 and 2009?
- Why did **Japan's economy** stagnate during the 1990s?
- Can the **Reserve Bank of India** bring prosperity by keeping interest rates low?

Review question on micro & macro economics

➤ Consider a big event, such as, Cricket World Cup final match at Eden Garden stadium of Kolkata in India.

From a micro economic point of view:

1. What are the factors influencing demand and supply of tickets?
2. Is the market for tickets is competitive or monopolistic?

From a macro economic point of view:

1. How might a big event affect tourism, spending and hence inflation rates and exchange rates?
2. How might a big event be affected by influences such as aggregate demand or interest rates?

1.1.2 Logic of economics/Nature/ Economic statements

- Economics is a popular, useful and significant social science.
- It involves economic activities of man.
- Economists use the scientific approach to understand economic activities
 - *Observation of facts,*
 - *Measurement, (how much change)*
 - *Explanation (cause-effect)*
 - *Verification.*
- Economics relies upon laws and theories for analysis

Positive economics / statements

- Positive economics is the study of what and why an economy operates as it does.
- Positive economics (statements) deals with matters of fact or they question about how things actually are.
- Positive statements are made without obvious **value-judgements** and emotions.
- Positive economics can be described as “**what is, what was, and what probably will be**”
- Statements are based on economic theory rather than raw emotion.

Examples

- The Chinese economy now has lower population growth rate than India.
- The Indian stock market has boomed in 2014.
- India is an over-populated country.

Unscrambling Cause and Effect

- Economists are particularly interested in positive statements about cause and effect. Are computers getting cheaper because people are buying them in greater quantities? Or are people buying computers in greater quantities because they are getting cheaper?
- To answer such questions, economists create and test economic models.

Descriptive eco. & economic theory

- Positive economics is often divided into descriptive economics & economic theory.
- Descriptive economics is simply the compilation of data that describes the facts
Ex – factual data on Indian Economy.
- An economic theory (Micro Eco., Macro Eco.) is a model or statement or set of related statements about cause and effect, action and reaction – Ex – Law of demand.

Normative economics/statements

- Normative economics is the study of how the economy should be. It is also known as Policy economics.
- Normative statements are **subjective** - based on opinion only - often without a basis in fact or theory. They are value-laden, emotional statements that focus on "what ought to be".
- **Examples:**
- Planning commission should not be replaced.
- The national minimum wage rate should be increased to reduce poverty
- Agricultural income should also be taxed.
- Food grains should be given at lower price to the poor families.

Fallacies – Improper conclusion

1. **Post hoc fallacy** – Assumes because one event occurred before an other event, the first event caused the second event.

Ex: This fallacy is often apparent when a newly elected government takes credit for improving the economy. Since the economy improved after the election, the election result must have been responsible.

Ex: Stock market crash in the late 1929 caused the Great Depression.

2. **Fallacy of composition** – What is true for the part is also true for a whole, you are committing the fallacy of composition.

Ex: A farmer who is better off because he has a bumper crop but may not be better off if every farmer has one.

Ex: Paradox of saving

1.1.3 Economic systems

- An economic system is a mechanism which deals with the production, distribution and consumption of goods and services in a particular society and comprises of people, institutions and their relationships.
- It addresses the problems like the allocation or scarcity of resources.

Market, Command and Mixed Economies

1. **Market Economy:** Where individuals and private firms make the major decision about production & consumption. It may also be called lassiez-faire economy. Ex - America
2. **Command Economy / Planned Economy:** Where the Government makes all important decisions about production & distribution. Ex - Soviet Union. It may be called as communistic economy as well.
3. **Mixed Economy:** Where the decision pertaining to production, consumption & distribution are taken by the Government as well as the individual such a market is called to have a mixed economy. Ex- India

Economic Systems

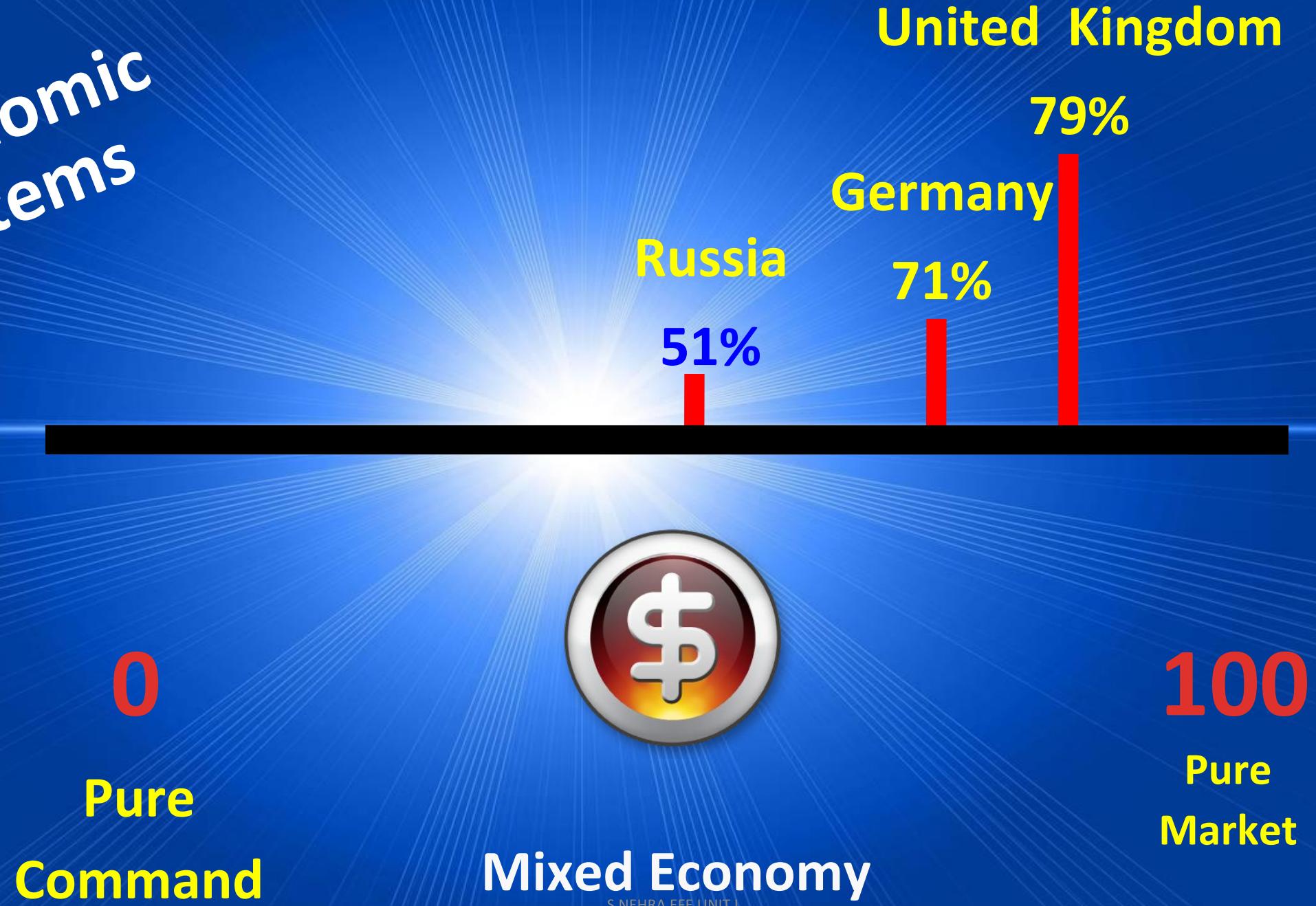
Pure
Command

Mixed Economy

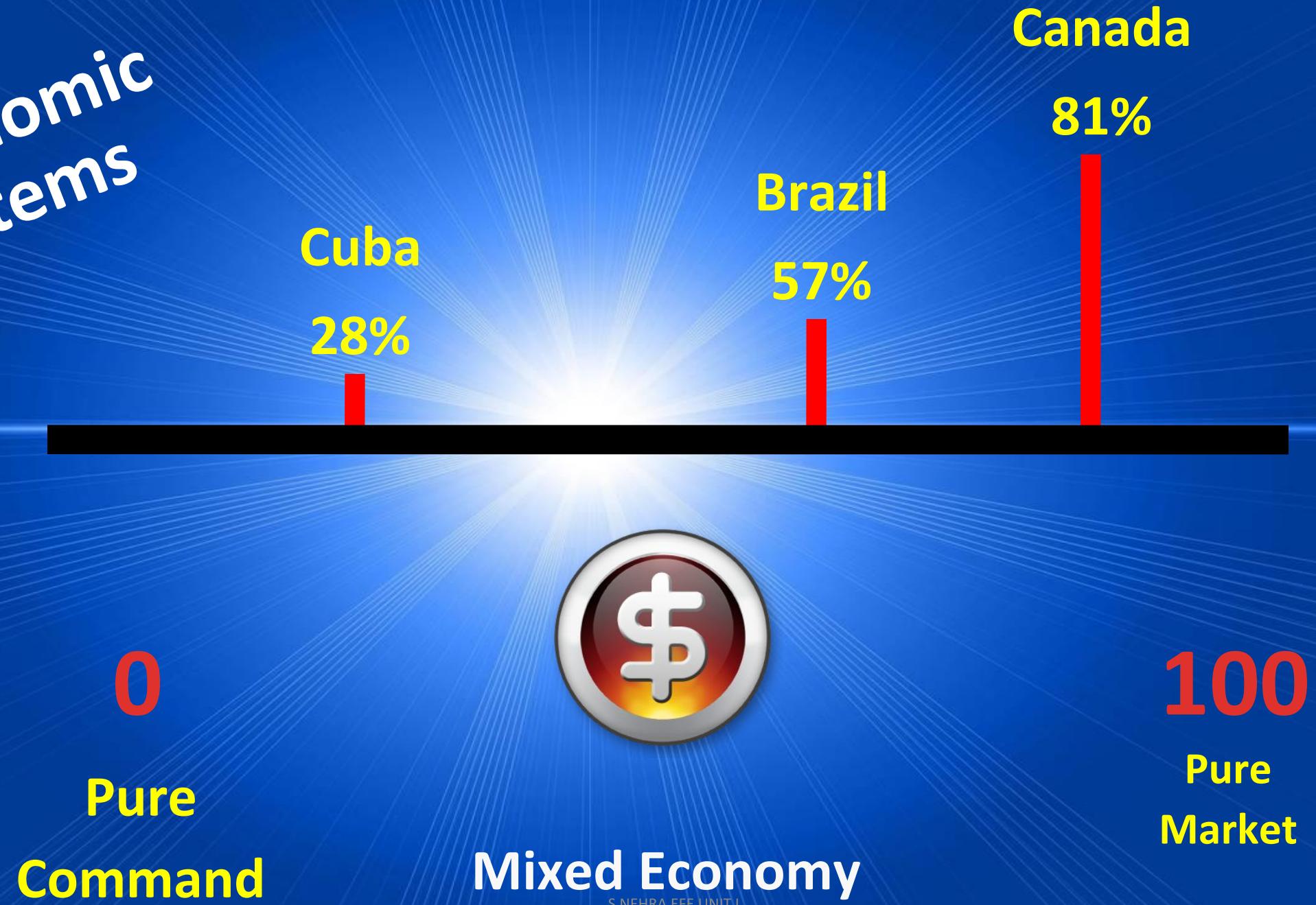
Pure
Market



Economic Systems



Economic Systems



Review Question

- Owing to global warming, people are more concerned about environmental issues. Demand for environmental-friendly vehicles hence increases, leading to increased price. Some automobile factories put a lot of efforts into the development of environmental-friendly vehicles in order to increase the market share.
- Identify the type of economic system?

Scarcity

- Scarce resources have alternative uses which compel us to make a choice – Ex.- Land
- **Scarcity** is the condition in which resources are not available to satisfy all the needs and wants of a specified group of people.

Identify what is scarce here?

- Laptops
- US \$
- Doctors
- Diamonds
- Air
- Flats in Jaipur
- Sunshine
- Creativity

Scarcity and Decision making – Economic problem

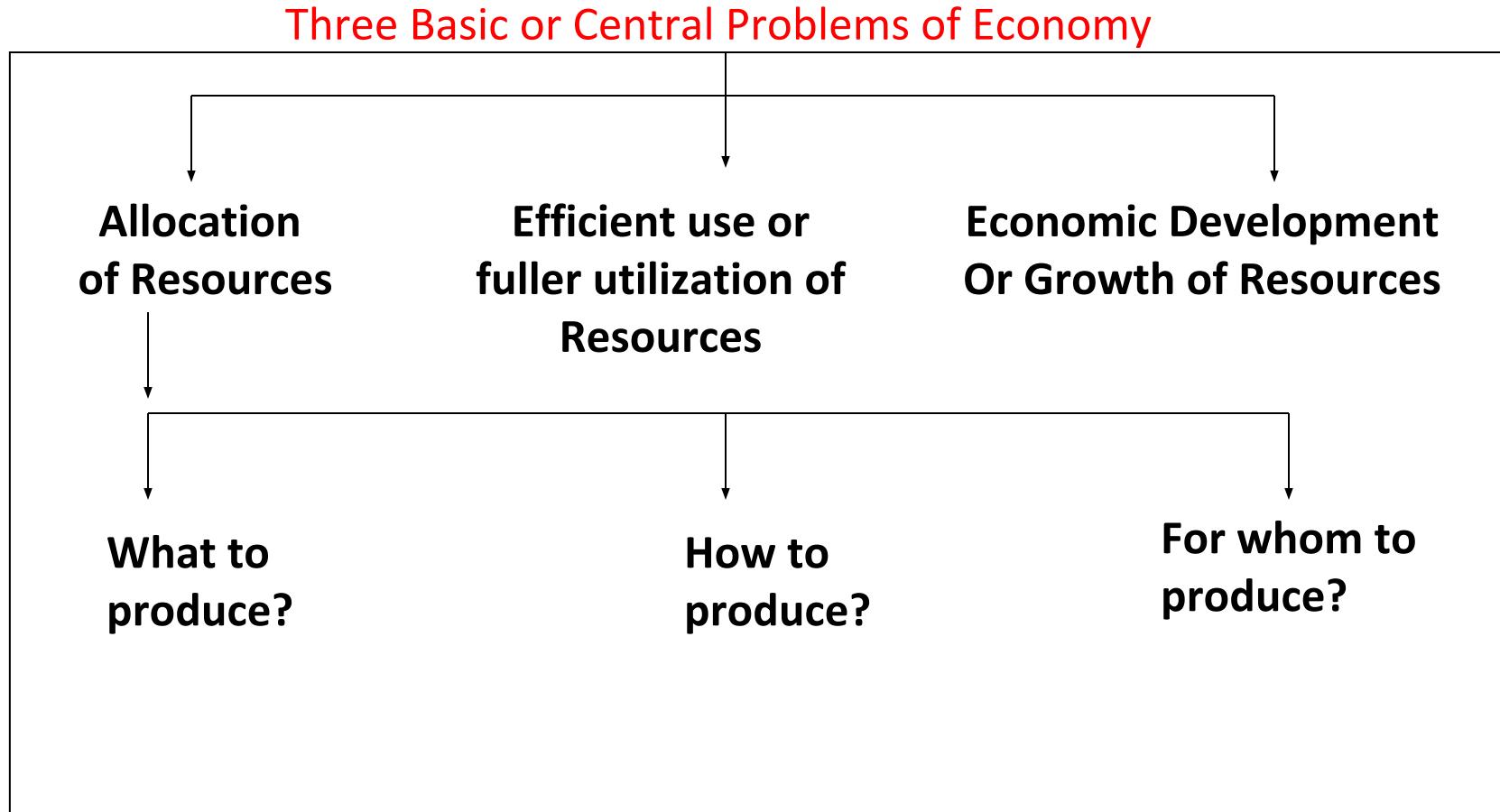
- The basic economic problem is about scarcity and choice.
- Because of scarcity, a choice decision must be made.
- The problem of *choice making* arising out of limited resources and unlimited wants is called *economic problem*.

Examples of Scarcity and Decision making

1. Production manager of Asian paints may face a choice making decision of producing paints for domestic or industrial use, due to scarcity of titanium dioxide.
2. Marketing manager of Maruti Suzuki has to decide whether to push up sales of Alto or Wagon R or Maruti Alto New 800 in view of limited advertisement outlay
3. Personnel manager of Titan watches has to decide whether to employ skilled labour on contract basis or to hire labour on daily wages

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- 4. The finance manager of Fortis hospital may face the problem of allocation of limited budget between pediatric, surgery and orthopedics departments
 - 5. An engineering institute may strive to maximise the value of teaching and research outputs subject to annual constraints
 - 6. The technological constraints may set the physical limits on the amount of output per unit time that can be generated by a particular machine, or workers employed by production manager of LG India.

1.2 Basic or Central Problems



Basic economic problems

1. **What to produce:**
 - Public goods vs private goods
 - Necessity vs luxury goods
 - Military vs civilian goods
2. **How to produce:** Labour intensive vs capital intensive technology
3. **Whom to produce:** Rich vs poor

India's rising income inequality: Richest 1% own 73% of total wealth (Oxfam India - Jan 2018)

- India added 17 new billionaires last year, raising the number to 101 billionaires.
- 73 percent of the wealth generated last year went to the richest one percent
- While 67 crore Indians who comprise the poorest half of the population saw one percent increase in their wealth.

Report of Oxfam India

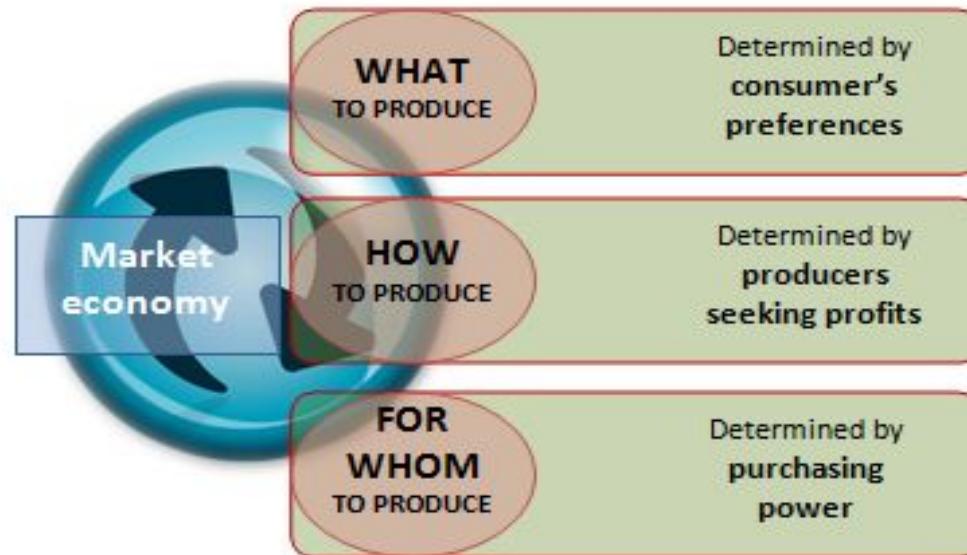
- Wealth of India's richest 1% increased by over Rs 20.9 lakh crore during 2017 — an amount equivalent to total budget of the central government in 2017-18
- In India, it will take 941 years for a minimum wage worker in rural India to earn what the top paid executive at a leading Indian garment firm earns in a year
- CEO of India's top information technology firm earns 416 times the salary of a typical employee in his company

World's richest 1% get 82% of the wealth – Oxfam Study

- Nearly 82 percent of global wealth generated last year (2017) went to one percent of the population, while the bottom 50 percent saw no increase at all
- Just 42 people own the same amount of wealth as the poorest 50 percent worldwide
- It takes just four days for a CEO from one of the top five global fashion brands to earn what a Bangladeshi garment worker will earn in her lifetime. In the US, it takes slightly over one working day for a CEO to earn what an ordinary worker makes in a year.

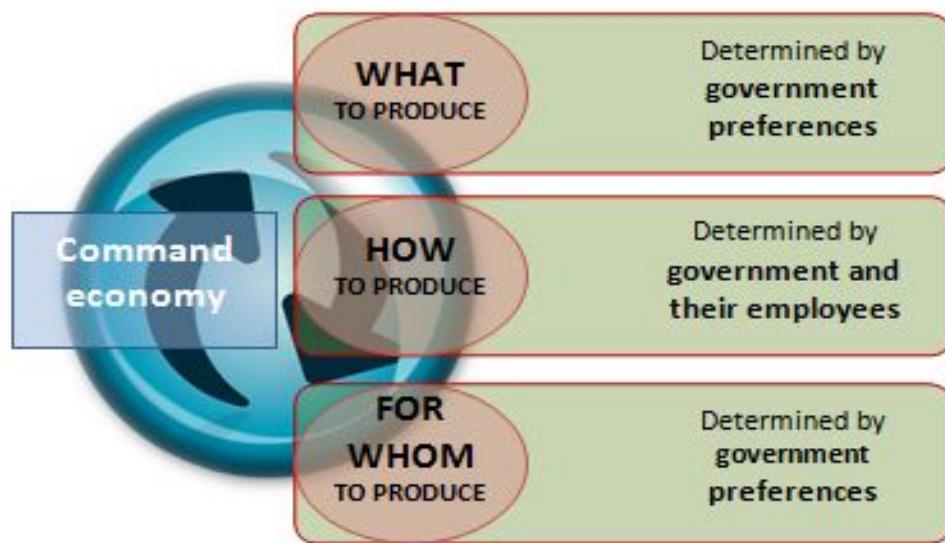
Solutions to basic economic problems

Market Economies



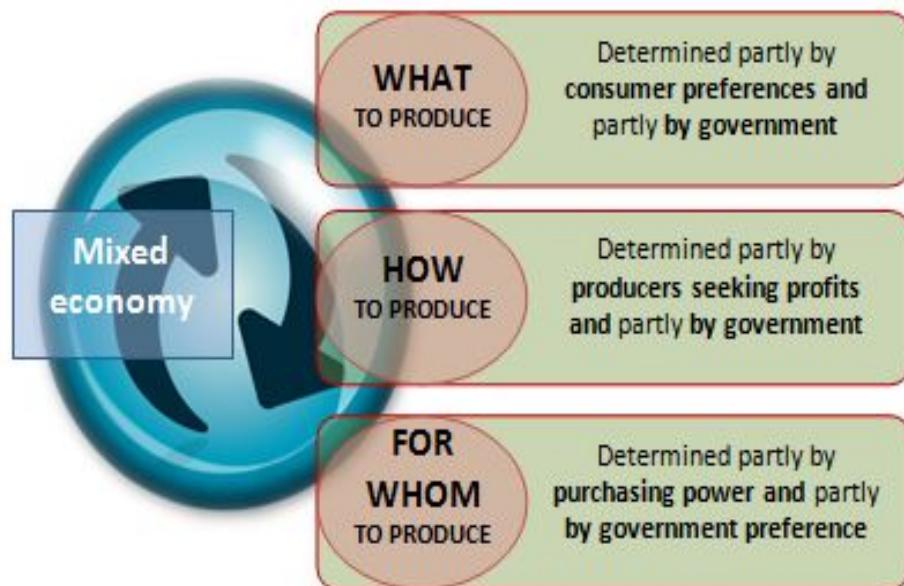
- Market economies work by allowing the direct interaction of consumers and producers who are pursuing their own self-interest.
- The pursuit of self-interest is at the heart of free market economics.

Command/Planned economies



- Free markets also fail at times to allocate resources efficiently, so remedies often involve the allocation of resources by government to compensate for these failures.

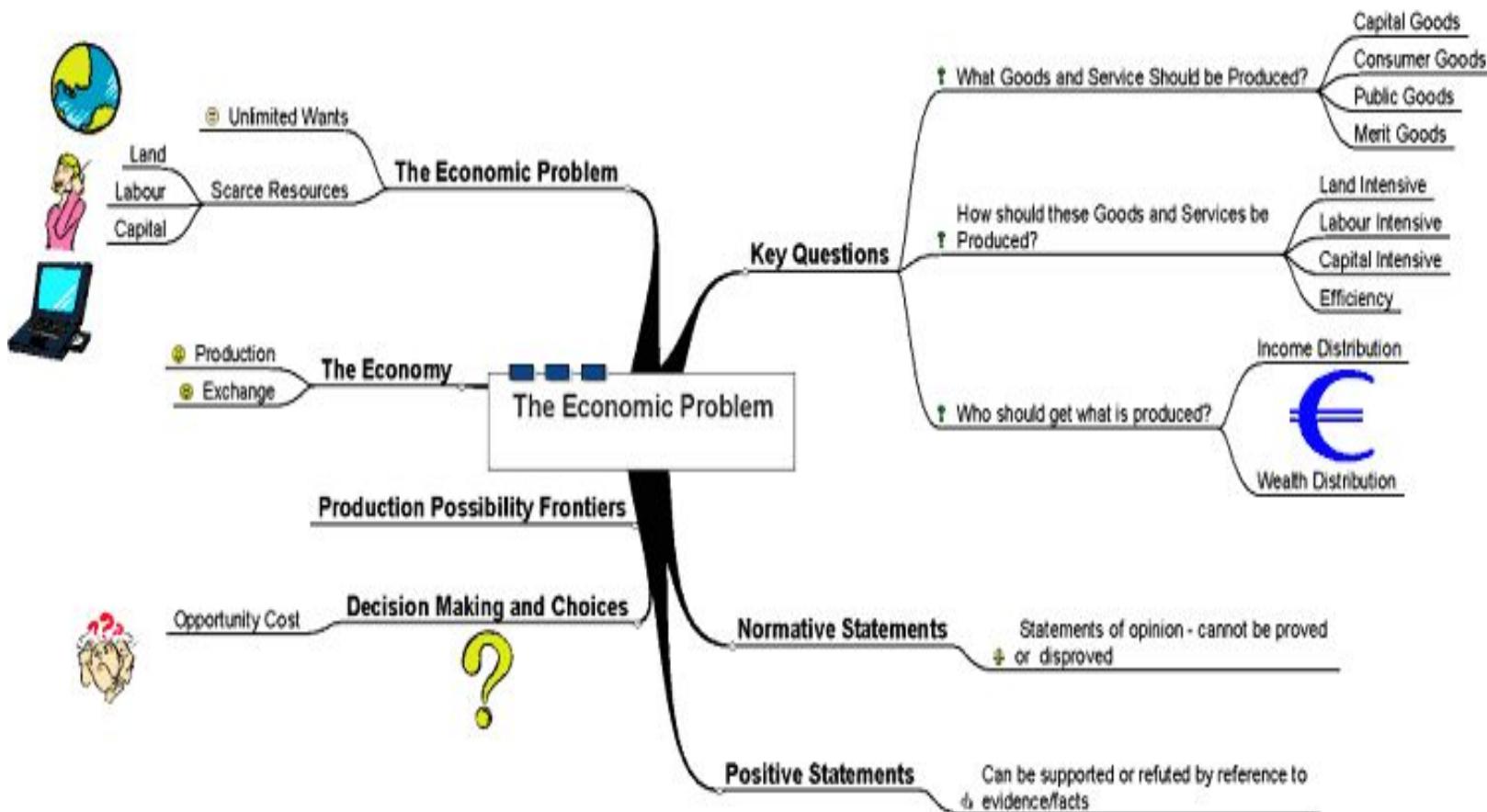
Mixed economies



- In reality, all economies are mixed, though there are wide variations in the amount of mix and the balance between public and private sectors.
- For example, in Cuba the government allocates the vast majority of resources, while in Europe most economies have an even mix between markets and planning.

Combination of improved technology and globalization will result in solving the basic economic problem

- The foremost effect of advances in technology is increased productivity and reduced waste of resources. If fifty years ago, energy for domestic use could only be produced by burning coal, today's technology can convert the sun's and waves' energy into useful electricity for us to use.
- On the other hand, technology can also serve to create new wants like internet, mobile phones
- There is increasing demand for such products
- This actually feeds more and new wants into the economic problem
- Globalisation brings many advantages including the benefits of specialization
- **Scarcity will continue as new wants will arise and benefits may not be spread equitably. The position may improve as a result of the changes but the economic problem will continue to exist.**



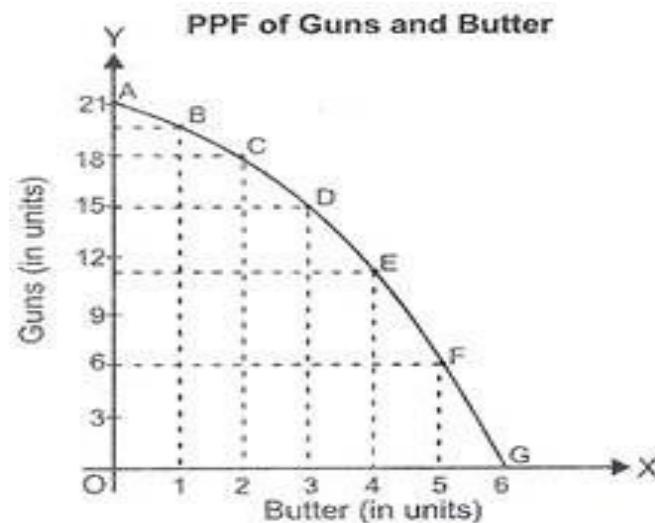
1.2.1 Production possibility frontier / curve

- PPF shows the maximum quantity of goods that can be efficiently produced by an economy, given its technological knowledge and quantity of available inputs

Assumptions:

1. Scarce input and technology
2. Considering an economy which produces only two economic goods
3. The resources are fully and efficiently utilized
4. Resources are not equally efficient in production of all products. So, when resources are transferred from production of one good to another, the productivity decreases;

Production possibility curve



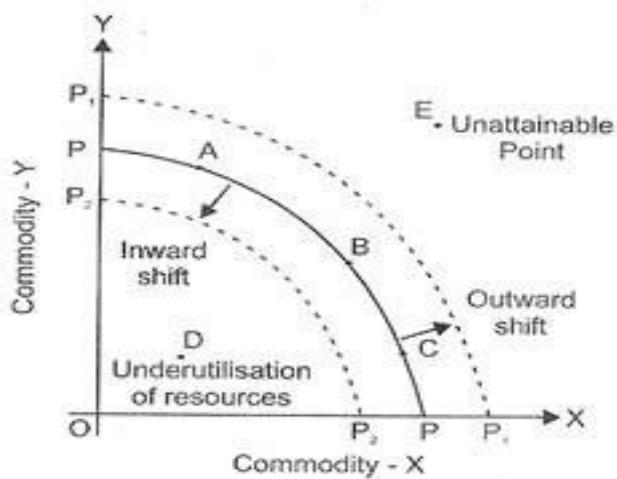
Characteristics of PPF

1. **PPF slopes downwards** - More of one good can be produced only by taking resources away from the production of another good. As there exists an inverse relationship between changes in quantity of one commodity and change in quantity of the other commodity.
2. **PPF is Concave Shaped** - PPF is concave shaped because of increasing marginal opportunity costs, i.e. more and more units of one commodity are sacrificed to gain an additional unit of another commodity.

Whether Economy will always operate on PPF?

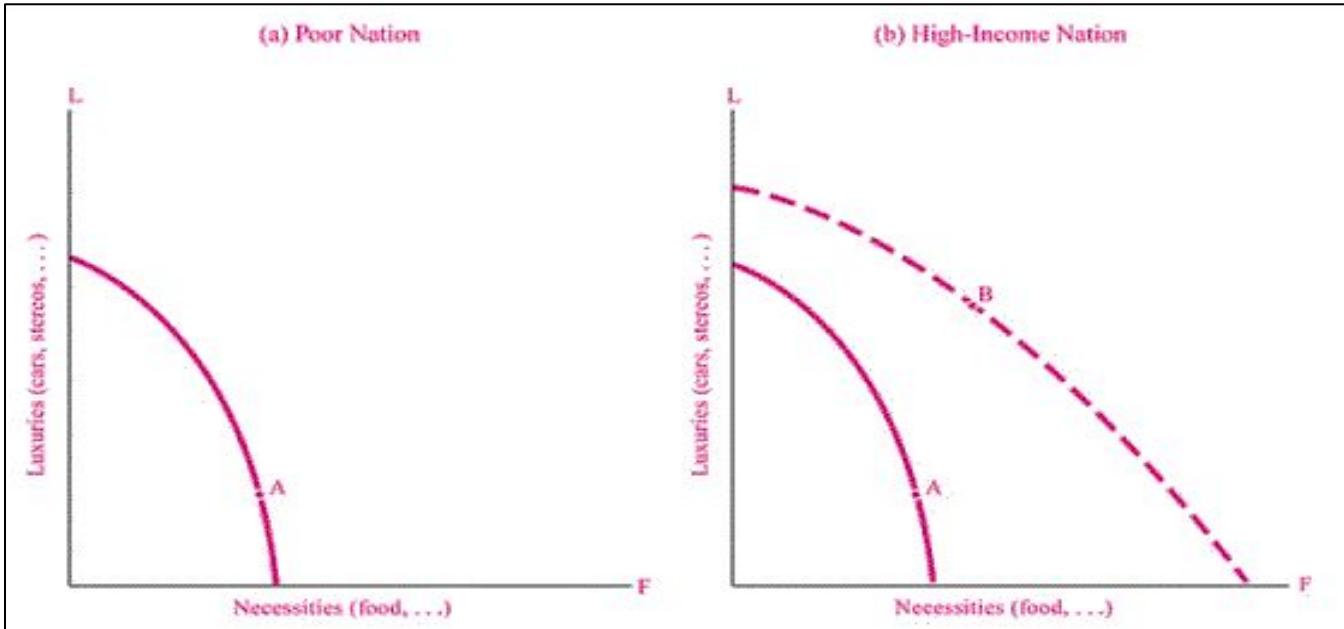
1. Economy will operate on PPF only when resources are fully and efficiently utilised.
2. Economy will operate at any point inside PPF if resources are not fully and efficiently utilised.
3. Economy cannot operate at any point outside PPF as it is unattainable with the available productive capacity.

Efficient, attainable & unattainable points



Applying PPF to Society's choices

1. Poor nation to High Income Nation



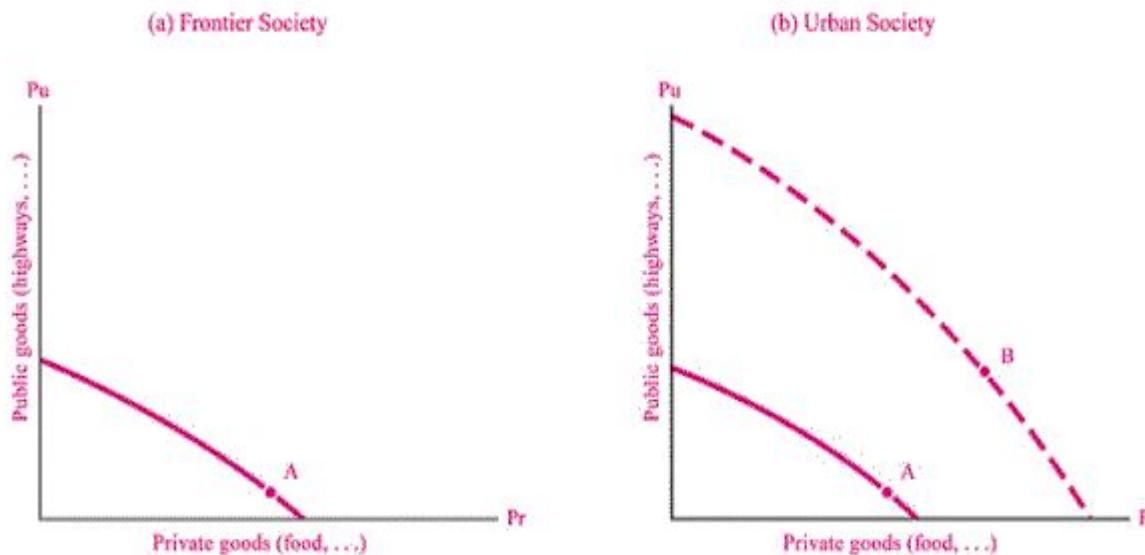
- Economic growth shifts the PPF outward
- Before development , the nation is poor and devote almost all its resources for necessities. Growth of inputs and technological change shift the PPF outside expanding its consumption of both the goods

Shift in Production Possibility Curve



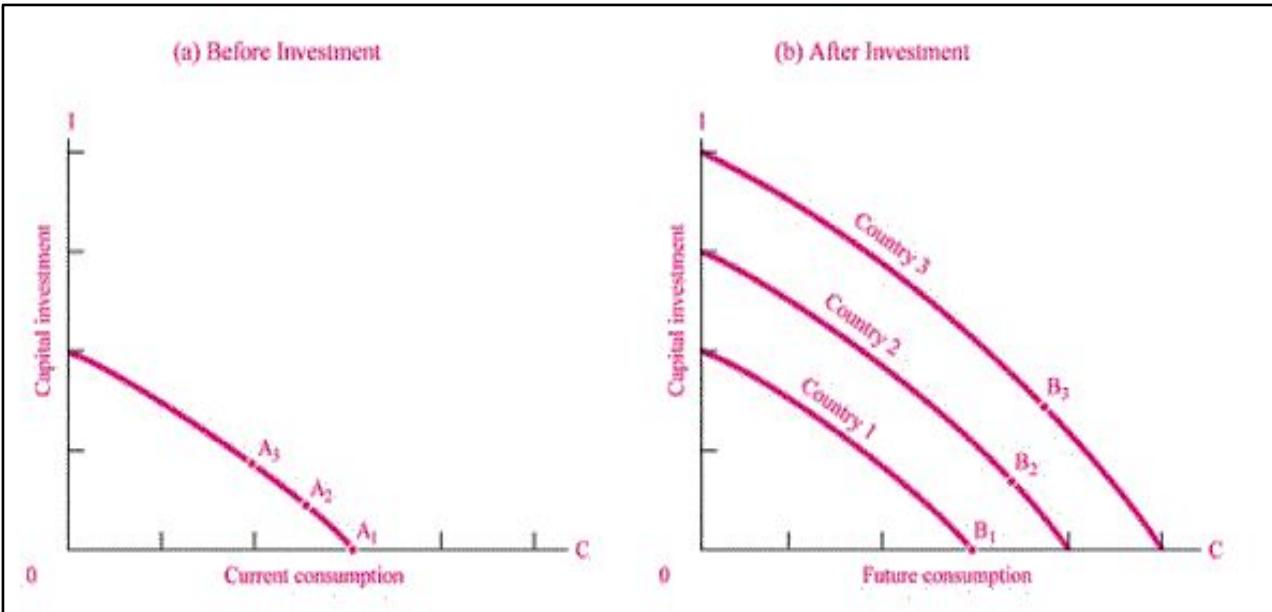
- An increase in inputs or improved technological knowledge enables a country to produce more of all goods and services, thereby shifting out the PPF.
- Poor countries should devote more towards food production while rich countries towards luxuries

2. Backward Society Vs Urban Society



- Economies must choose between Public Goods and Private Goods
- A poor society have little resources for public goods like clean air, health whereas a modern urbanized society is more prosperous and chooses to spend more of its higher income on public goods and government services

3.Todays Choices Vs Future Consequences



- Investment for future consumption requires sacrificing current consumption
- Countries that invest heavily can have both higher investment and consumption in future

Review question

1. Economic slowdown in some parts of the world adversely affected demand for Indian exports. How will this affect the Production Possibilities Frontier for India?
2. What will be the impact of large scale outflow of foreign capital on Production Possibilities curve on the economy?
3. What will be the impact of recently launched ‘Clean India Mission’ (Swachh Bharat Mission) on the Production Possibilities curve of the economy?

Case let – A new Indian car

On 11 January 2008, Tata, an Indian producer, launched a new model, the Nano. This day it became the cheapest car available, selling for half the price of the next cheapest car. For the price of One lakh rupees ,a brand new Nano could be bought or, for instance, a second hand 1993 Land Rover.

The car is intended initially for the home market. It is thought that millions could be sold in India. The firm also plans to export the car to Latin America. South-east Asia and Africa.

Although selling the car at such a low price will make car ownership more affordable for more people, there are still many millions of people who would like a Car but do not have the income to buy one.

1. Using examples, identify three factors of production used in making cars.
2. Give an example of opportunity cost from the passage.
3. What evidence is there of the economic problem from the passage?

A German travel company consider its future

A German travel company decides to stop selling its holidays in Italy and instead to offer holidays in a new destination. This is the Maldives, a group of islands in the Indian Ocean, famous for their long hours of sunshine and sandy beaches. Tourism is a fast growing industry. Not all families, however, are able to go on holiday whether at home or abroad. Most of those who take holidays would like to have more holiday breaks.

1. What evidence is there in the passage of scarcity?
2. Using examples, identify three factors of production involved in providing holidays in the Maldives.
3. Explain the difference between an economic good and a free good.
4. Identify a free good from the passage.
5. Explain the relevance of opportunity cost for a travel firm in deciding how to use its resources.

1.3 Importance of economics in engineering
