Param Pujya Dr. Babasaheb Ambedkar Smarak Samiti's

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DAIMSR

National Income

# Programme Educational Objectives

- *Our program will create graduates who:*

- *1. Will be recognized as a creative and an enterprising team leader.*
- *2. Will be a flexible, adaptable and an ethical individual.*
- *3. Will have a holistic approach to problem solving in the dynamic business environment.*

Managerial Economics Course Outcomes

- CO1-Given the changes in the price of a commodity, substitute or complementary goods and services, consumers' income in addition to the changes in quantity demanded, the student manager will be able to establish the interrelationship between the independent variable and demand that would aid in decision making.

- CO2-Given a set of historical & current demand data the student manager will be able to estimate future demand for goods and services using survey and statistical techniques (such as Consumer survey, Sales force opinion, Expert opinion and Delphi technique; times series analysis and regression technique).

- CO3-Given the scale of inputs in a production scenario, the student manager will be able to comment on the output and categorize the reasons for economies and diseconomies of scale.

- CO4-Given the structural details of a market (Monopoly, Oligopoly, Monopolistic competition and Perfect competition) the student manager will be able to determine the price and output for a given market structure.

- CO5-Given the components of national income, the student managers will be able to ascertain the GDP, GNP, NDP & NNP at factor cost and market prices using the product, income and expenditure method and vice-versa.

- CO6-Given the components of monetary and fiscal policy, the student manager will be able to explain the impact of the same on the business activities.

Circular Flow in Economy
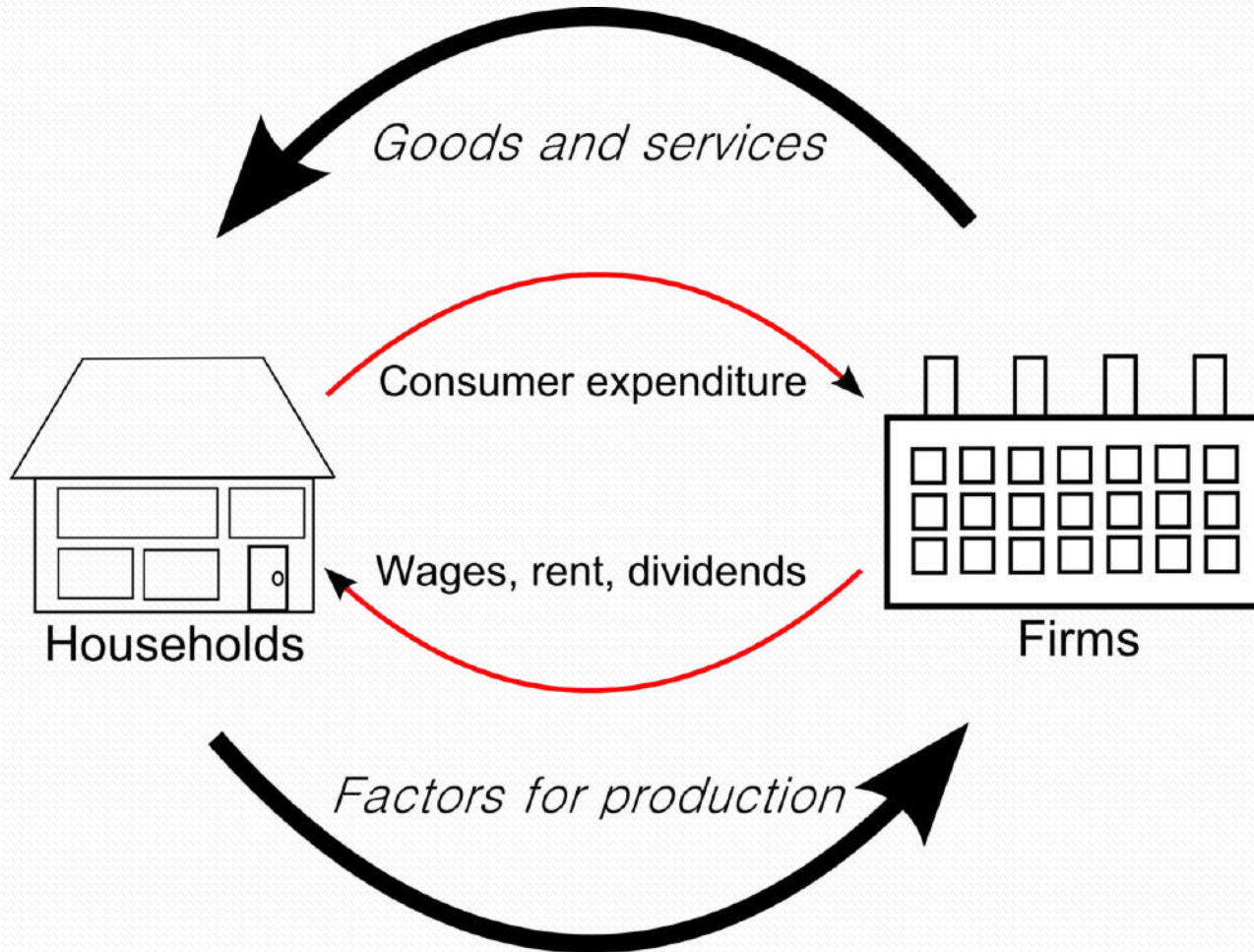
Circular Flow

- **Resource market** A market in which house holds sell and firms buy resources or the services of resources.

- **Product market** -A market in which products are sold by firms and bought by households.

- **Circular flow model-**The flow of resources from households to firms and of products from firms to households. These flows are accompa nied by reverse flows of money from firms to households and from households to firms.

Circular Flow Model
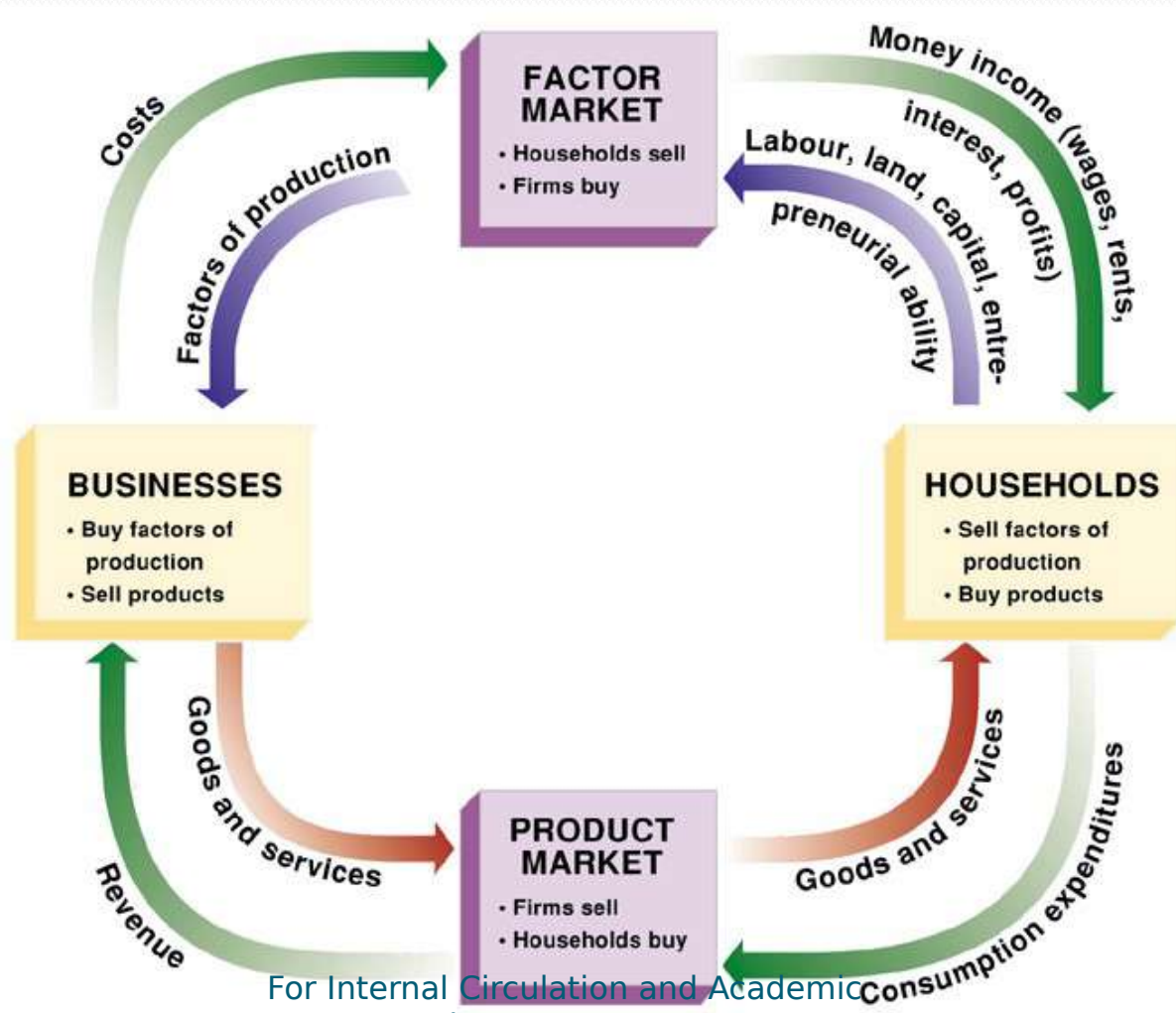
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National Income

- The labor and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities material and immaterial including services of all kinds- *Marshall*

- National income is a collection of goods and services reduced to a common basis by being measured in terms of money- *Hicks*

- A national income estimate measures the volume of commodities and services turned out during a given period counted without duplication- *National Income Committee of India (1951)*

National Income

- National income is the most important macroeconomic variable and determinant of the business level and economic status of a country.

- Conceptually, national income is the money value of all final goods and services produced in a country during a period of one year.

- Net addition to the national stock of goods and services in closed economy

- And in open economy in addition to above export less imports.

Economic and non-economic activities

- Economic activities
  - Economic activities include all human activities which creates goods and services that can be valued at market price
  - Production by farmers (both household and market consumption), production by private, public and government firms, services by professionals like doctors, lawyers, consultants etc.
- Non-economic activities
  - Non economic activities are those which produce goods and services that do not have any market value.
  - Spiritual, psychological, social and political services. Hobbies, self service, service of housewives, service to neighbors etc.

GNP

- **Gross National Product**
- It is the basic measure of a nation's output stated in terms of money representing the total value of a nation's annual output. It is evaluated in terms of market prices. It includes all the economic productions in the economy from apples and automobiles to zinc and zippers.
- GNP is defined as value of all final goods and services produced during a specific period, usually one year, plus income earned abroad by the national minus incomes earned locally by the foreigners.

GNP and GNI

- GNP = GNI, GNI (Gross National Income), the difference is only of procedural nature
- While GNP is estimated on the basis of product flow, GNI is estimated on the basis of money income flows (i.e. wage, profit, rent, income, etc.)

GDP

- **Gross Domestic Product**
- GDP is defined as the market value of all final goods and services produced in the domestic economy during a period of one year, plus income earned locally by the foreigners minus incomes earned abroad by the nationals.
- The concept of GDP is similar to GNP with a significant procedural difference.

GDP and GNP

- In case of GNP, income earned by the national in foreign countries are added and incomes earned locally by the foreigners are deducted from the market value of domestically produced good and services.

- And in case of GDP, the process is reversed i.e. incomes earned locally by the foreigners are added and income earned by the national in foreign countries are deducted from the total market value of domestically produced good and services.

NNP

- **Net National Product**
- NNP is defined as GNP less depreciation
- Depreciation is that part of total productive assets which is used to replace the capital worn out in the process of creating GNP.
- NNP is the real measure of national income.

NIFC

- **National Income at Factor Cost**
- NNI (Net National Income) is similar to NNP
- However, NNI = NNP – indirect taxes
- NIFC= NNP - indirect taxes+ subsidies

Personal Income (PI)

- This is the actual income received by the individuals and households in the country from all sources. It denotes aggregate money payments received by the people by way of wage, interest, profits, and rents. It is the spendable income at current prices available to individuals.

- Corporate income taxes and payment towards social security measured will not be available for individuals, so these have to be deducted from what is earned. Payments such as old age pensions, widow pensions, etc. that accrue to people have to be added.

P.I. = N.I. – corporate taxes – undistributed corporate profits – social security contributions + transfer payments

Transfer payments may be by government or business transfers, interest paid by government, dividends, etc.

Disposable Personal Income (DPI)

- The whole of personal income is not available for consumption as personal direct taxes have to be paid. What is left after payment of personal direct taxes is call disposable personal income.

  D.P.I = P.I. – personal taxes, property taxes and insurance payments

- This is the amount available for individuals and households for consumption. It is not that the entire D.P.I. is spent on consumption. A part of it may be saved, therefore D.P.I. = consumption + savings

Methods of Measuring National Income

Methods of Measuring National Income

- National income of a country is generated by its people participating in different kinds of economic activities and producing goods and services.

- For measuring national income, an economy is viewed from three different angles.

- The national economy is considered as an aggregate of productive units of different sectors such as agriculture, mining, manufacturing, trade, commerce and services, etc.

- The whole national economy is viewed as a combination of individuals and households owning different kinds of factors of production which they use themselves or sell factor-services to make their livelihood.

- The national economy may also be viewed as a collection of consuming, saving and investing units

Methods of Measuring National Income

- Following these notions of national economy, national income may be measured by three different corresponding methods
- Net product method
  - When the entire national economy is considered as a aggregate of producing units
- Factor income method
  - When national economy is considered as combination of factor owners and users
- Expenditure method
  - When national economy is viewed as a collection of spending units

Net output or Value added method

- In its standard form this method consist of three stages
- Estimating the gross value of domestic output in the various branches of production, according to CSO publication, fifteen sub categories are currently used in India; the value of gross output is computed by multiplying the output of each category of sector by its respective market price and adding them together
- Determining the cost of material and services used and also the depreciation of physical assets
- Deducting these cost and depreciation from gross value to obtain the net value of domestic output

Net output or Value added method

- Y = (P - D) + (S - T) + (X - M) + (R - P)

Where,

- Y = Total income of the nation
- P = domestic output of all the productive sectors
- D = depreciation allowance
- S = subsidies
- T = indirect taxes
- X = exports
- M = imports
- R = receipt from abroad
- P = payments made abroad

Factor income or income share method

- Under this method, the national income is calculated by adding up all the "incomes accruing to the basic factors of production used in producing the national product.
- The basic factors of production are land, labor, capital and organization.
- Accordingly the national incomes equals the sum of the corresponding factor earnings.
- Thus, National income = Wages + Rent + Interest + Profit

Factor income or income share method

- Y = w + r + i + n + (X - M) + (R - P)

Where,

- Y = Total income of the nation
- w = wages
- r = rents
- i = interest
- n = profit
- X = exports
- M = imports
- R = receipt from abroad
- P = payments made abroad

Expenditure method 1 (outlay method)

- It measures national income at the final expenditure stages.
- All the money expenditures at market price are computed and added up together
- Items of expenditure which are taken into account are
  - Private consumption expenditure
  - Direct tax payments
  - Payments to non-profit making institution and charitable organization like school, hospitals, orphanages, etc.
  - Private savings

Expenditure method 2 (final product method)

- Value of all the products finally disposed off are computed and added up, to arrive at the total national expenditure
- Under this method, following items are considered
  - Private consumer goods and services,
  - Private investment goods
  - Public goods and services
  - Net investment abroad
- The second method is more extensively used because the data required in this method can be collected with greater use and accuracy

Expenditure method 2 (final product method)

- Y = (C + I + G) + (X - M) + (R - P)

Where,

- Y = Total income of the nation
- C = consumption expenditure
- I = investment expenditure
- G = government purchases
- X = exports
- M = imports
- R = receipt from abroad
- P = payments made abroad

Choice of methods

- Two main considerations on the basis of which a particular method is chosen are:
  - The purpose of national income analysis
  - Availability of necessary data
- If the objective is to analyze the net output or value added, the net output method is more suitable
- In case the objective is to analyze the factor income distribution, the suitable method for measuring national income is the income method
- If the objective at hand is to find out the expenditure pattern of the national income, the expenditure or final products method should be applied.
- Here, net output method is most suitable in comparison to income and expenditure methods. This method is popular due to easy availability of data

Difficulties in measuring National Income

- **Conceptual difficulties**: there has been a difference of opinion regarding the term 'nation' in the concept of national income.

- **Overlapping of occupations**: in rural areas, a farm worker works in farm in seasons and drive country-cart in off seasons. Money lender lends money, also do farming on his land.

- **Difficulty in value estimation:** in rural areas, the cultivators, artisans and cottage industry workers do not have a fair idea of the expenses of their occupation. Hence the net value of their products cannot be estimated precisely.

- **Non- monetized sector:** in rural areas, barter system is still in existence, it creates the problem of guess work & approximation.

- **Problems in agricultural sector:** data made

Difficulties in measuring National Income

- **Problems in industrial sector:** data relating to output, cost, etc. are available only in big units. The small units do not maintain these figures correctly.

- **Non-applicability of a uniform formula**: in a big country where wide disparities and regional differences, a uniform formula cannot be applied. Every region would be a separate entity requiring specialized approach suited only to that region.

- **Double-counting:** the error of double-counting is another obstacle to be avoided in the calculation of national income. If the value of the output of sugar and sugarcane are counted separately, the value of the sugarcane utilized in producing sugar will have been counted twice.

- **Inefficient data collection:** the machinery for collecting statistical data may not be efficient. The investigators, preparation of adhoc figures, making sample surveys, etc.

Uses of National Income statistics/ Data

- **Formulation of economic policies:** national income statistics are valuable instruments of economic analysis and a guide to plan and formulate economic policies.

- **Studying economic structure**: it gives an idea of the structure of the economy. The growth of national income is an index of the growth of the productive capacity of an economy.

- **Inter sectoral comparisons:** it helps to study inter sectoral growth. Share of various sectors can be studied and compared to find out structural defects and weaknesses of the economy.

- **Indicator of economic welfare:** it enables us to study per capita income or per capita consumption which are general indicators of economic growth. It is also helpful in studying the consumption, investment and savings pattern of citizens of a country.

- **Making international comparisons**: national income estimates enables us to make international comparisons and standard of living of people.

- **Contribution to international institutions:** it shows the capacity of a country to bear some common burden of international institutions like the U.N.O.

National Income Formulas

- GNP = value of all final goods and services produced + (X-M) + (R-P)
- NNP = GNP - depreciation for the given year
- NIFC= NNP - indirect taxes+ subsidies
- PI = NIFC – corporate taxes – undistributed corporate profits – social security contributions + transfer payments
- DPI = PI – personal taxes, property taxes and insurance payments

Ups and Downs of Economic Activity

Peak

Peak

Recession

Recovery

Trough
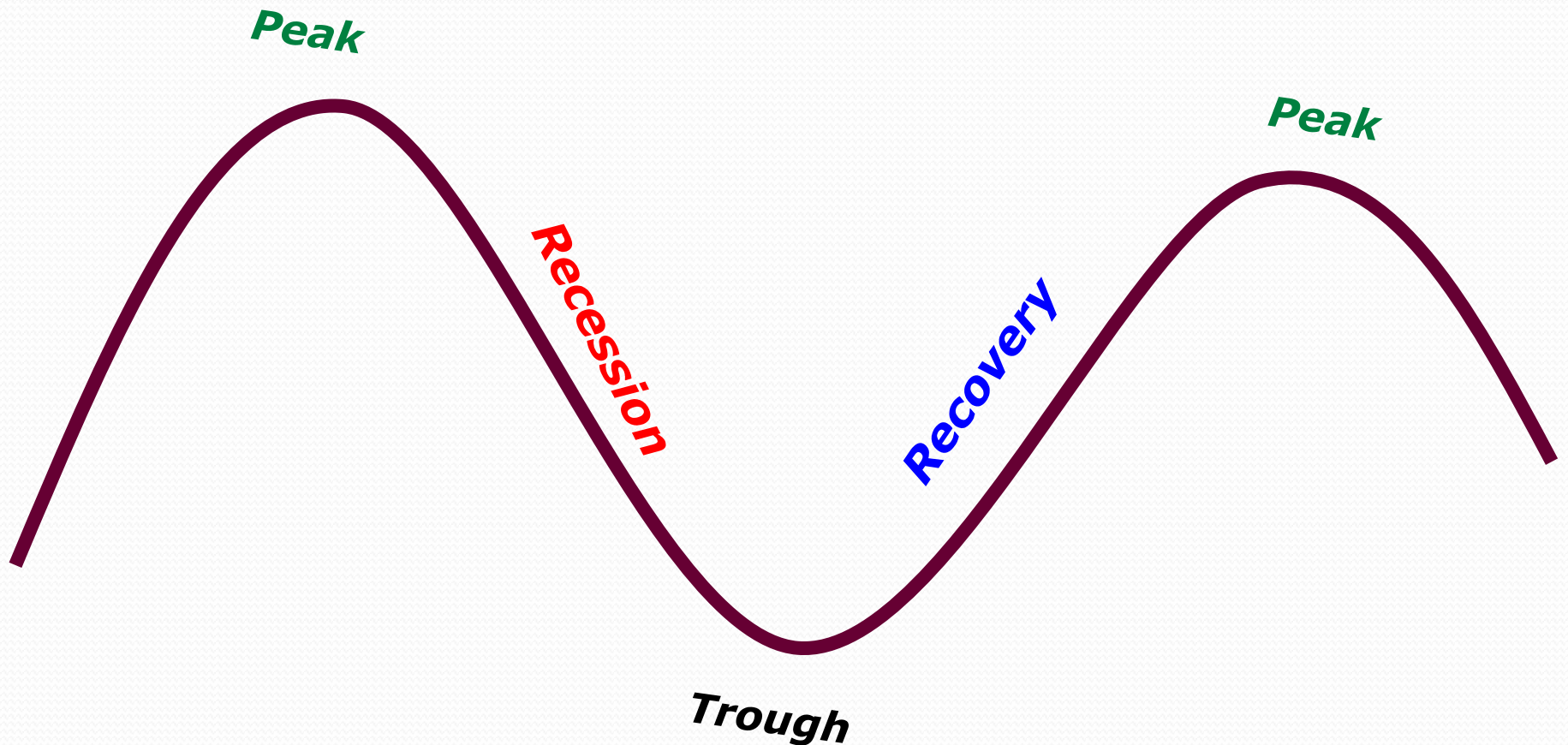
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Business Cycles

√ **The term business cycle refers to the recurrent ups and downs in the level of economic activity, which extend over several years.**

√ **Individual business cycles may vary greatly in duration and intensity.**

√ **All display a set of phases.**

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PEAK

Level of business activity

GROWTH TREND

Time
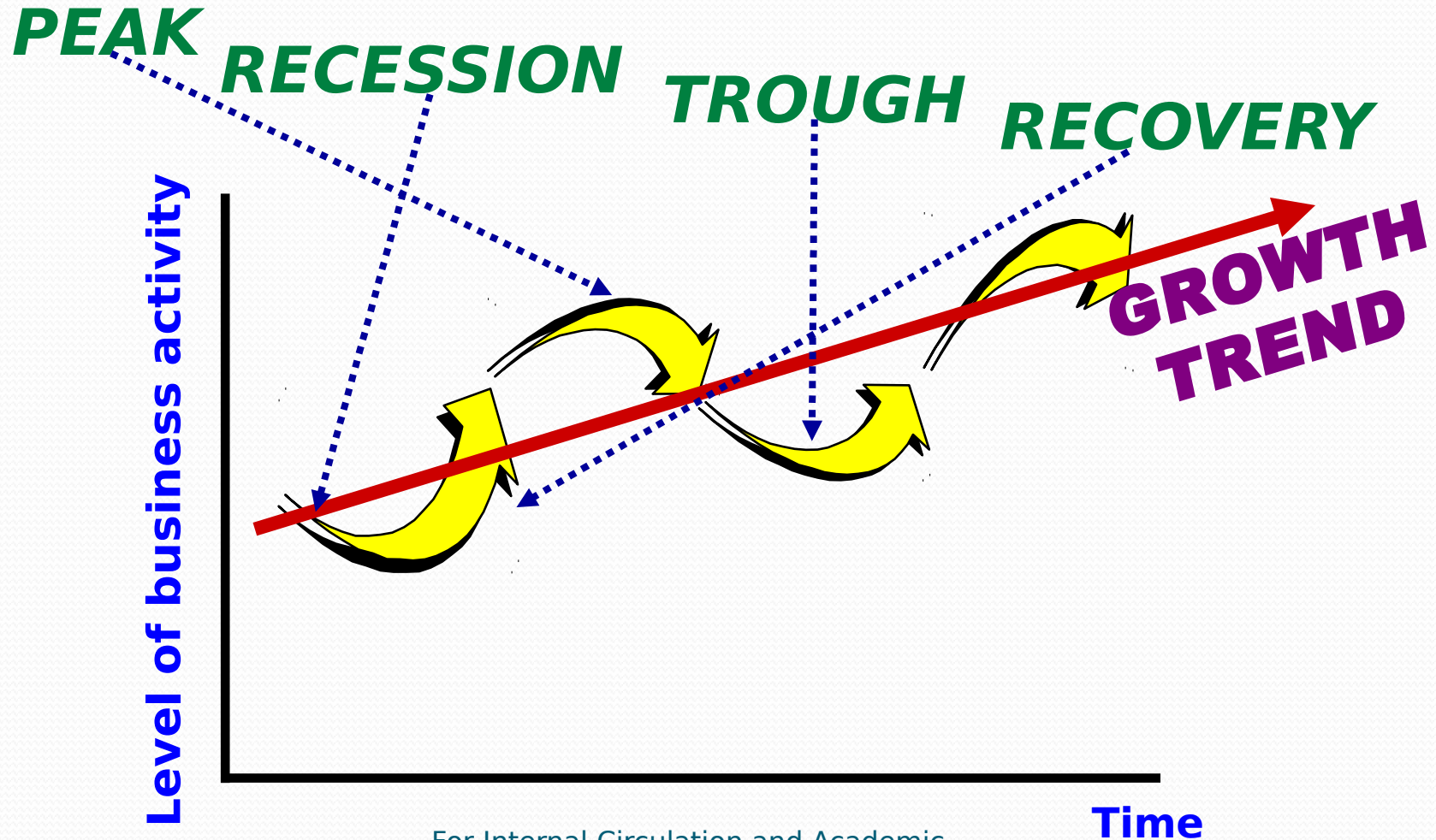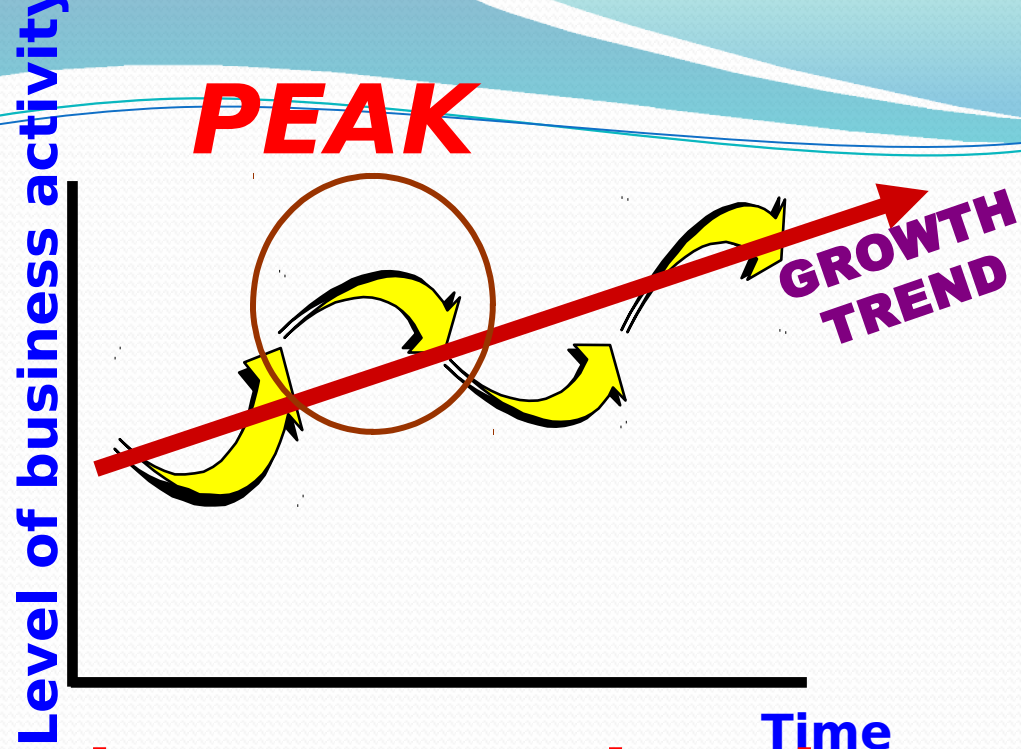
√ **Peak or prosperity phase:**

☐ **Real output in the economy is at a high level**

☐ **Unemployment is low**

☐ **Domestic output may be at its capacity**

☐ **Inflation may be high.**
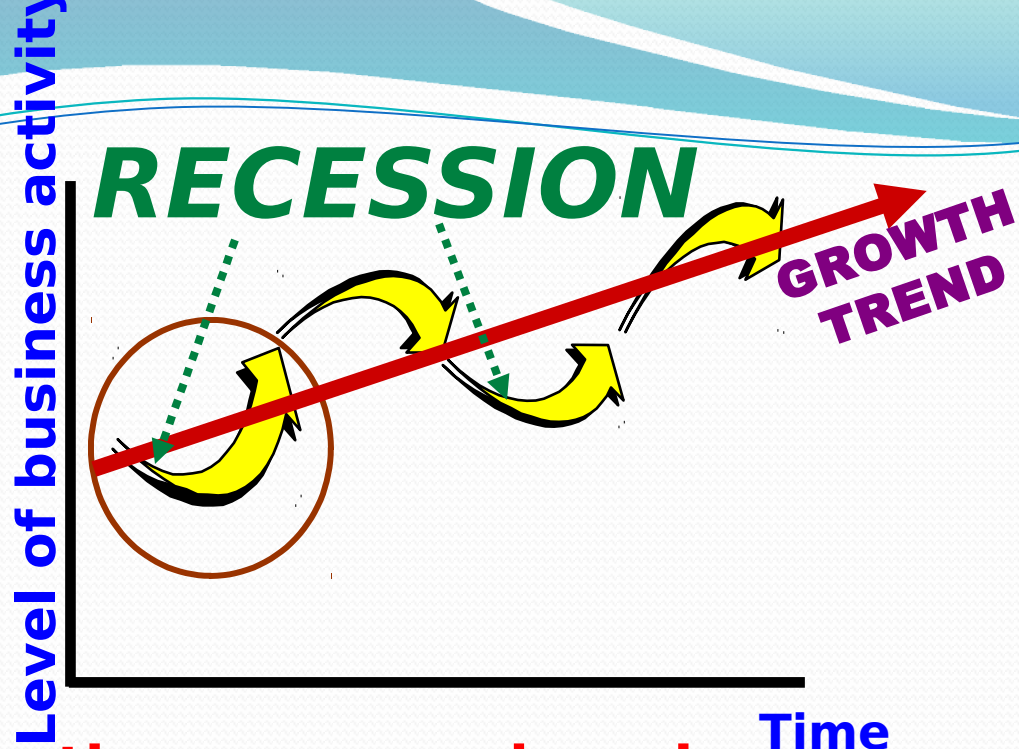
RECESSION

√ **Contraction or recession phase:**

❑ **Real output is decreasing**

❑ **Unemployment rate is rising.**

❑**As contraction continues, inflation pressure fades.**

❑ **If the recession is prolonged, price may decline (deflation)**

❑**The government determinant for a recession is two consecutive quarters of declining output.**

TROUGH

Level of business activity

GROWTH TREND

Time
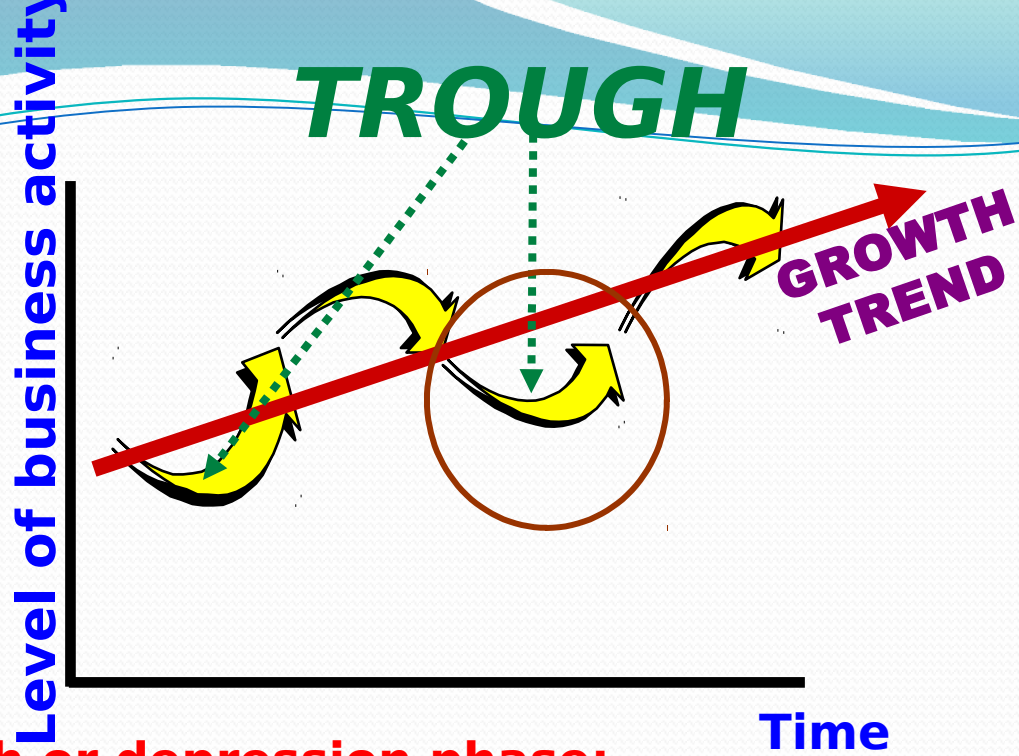
√ **Trough or depression phase:**

❑ **Lowest point of real GDP**

❑ **Output and unemployment "bottom out"**

❑ **This phase may be short-lived or prolonged**

❑ **There is no precise decline in output at which a serious recession becomes a depression.**
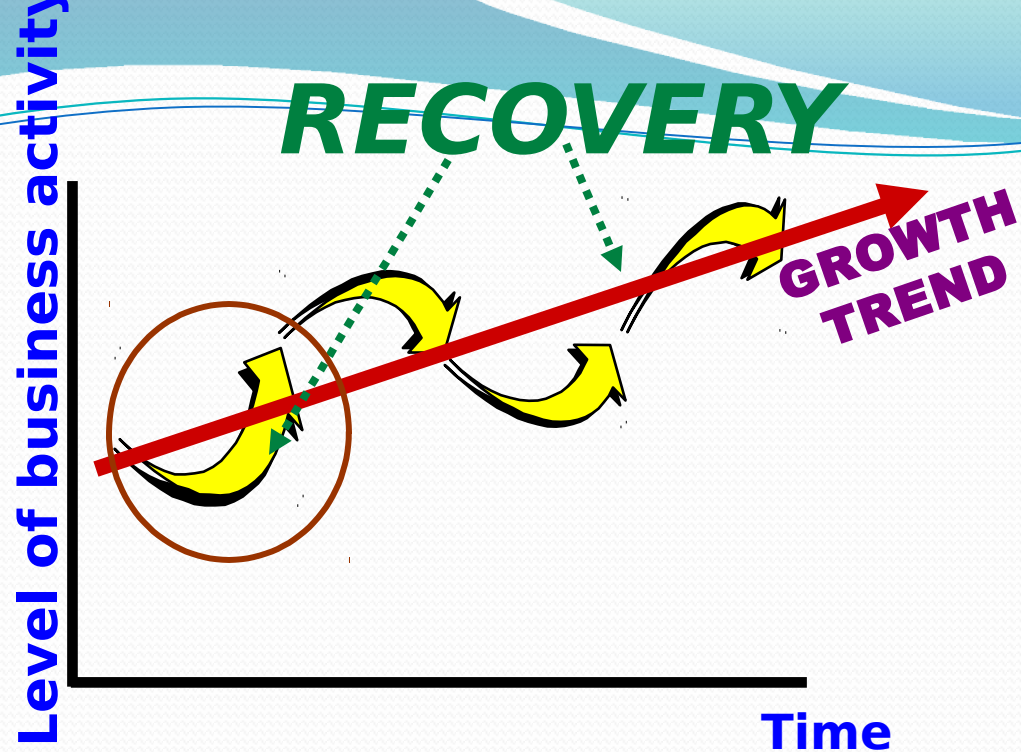
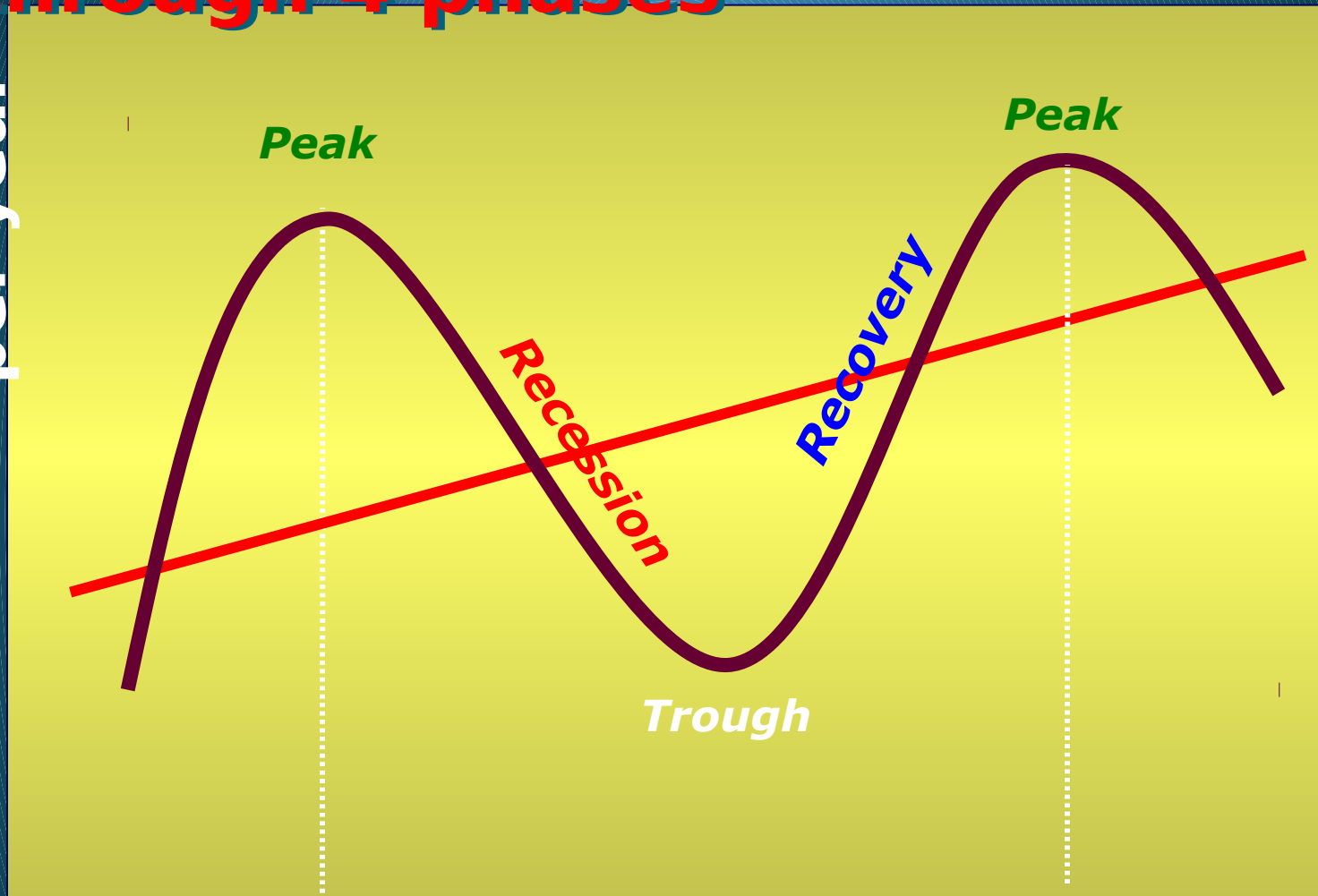√ **Expansionary or recovery:**

☐ **Real output in the economy is increasing**

☐ **Unemployment rate is declining**

☐ **The upswing part of the cycle.**

- **Based on the theory that <u>expectations of future profits are the motivating force in the economy.</u>**
  - **Companies may expand production of goods and services and investment in new structures and equipment,when business executives believe that their sales and profits will rise.**
  - **When they believe profits will decline, they reduce production and investment.**

auses of Fluctuations

- ✓ **Innovation**
  - ✓ **Political events**
- ✓ **Random events**
  - ✓ **Wars**
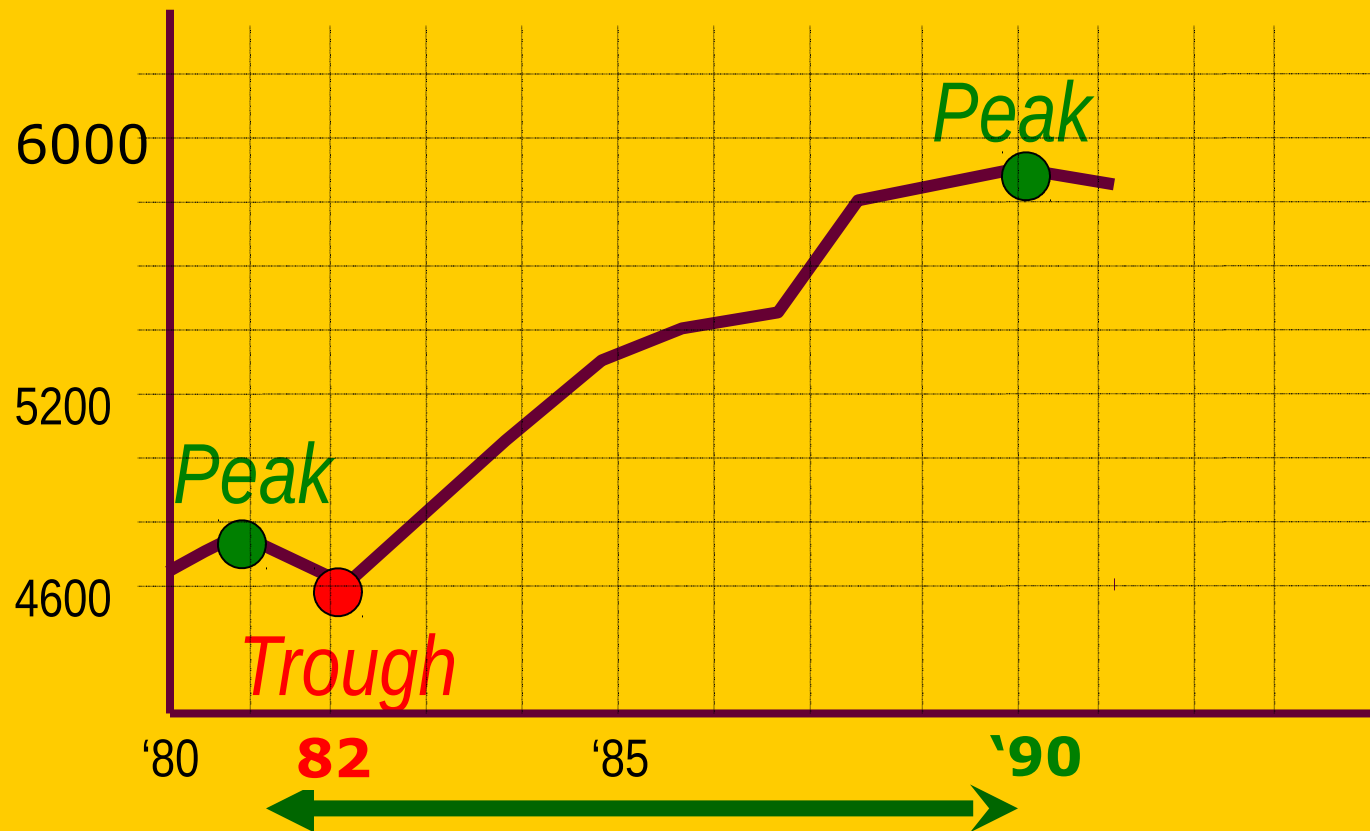- ✓ **Level of consumer spending**
  - ✓ **Seasonal fluctuations**
- ✓ **Cyclical Impacts — durable and non durable**