CHAPTER 1
THE SCIENCE OF MACROECONOMICS

Objectives:

- Review the meaning, goals, and focus of macroeconomics
- Give an overview of the methods and approach of macroeconomics.

I. The Meaning of Macroeconomics.

Definition: ***Macroeconomics is the study of the behaviour and performance of the economy as a whole.***

II. The Goals of Macroeconomics.

- to understand the past and present performance of the economy;
- to provide the basis for informed forecasts of the future performance of the economy;
- to evaluate the effects of economic policies on the performance of the economy.

III. The Focus of Macroeconomics.

Macroeconomics focuses on the behaviour of ***key macroeconomic variables*** including:

- Real GDP [gross domestic product] - a measure of aggregate output, income, and spending
- The inflation rate - a measure of how fast prices, in general, are rising.
- The unemployment rate - the proportion of the labour force out of work.
- The interest rate - the cost of borrowing and return to saving.
- The exchange rate - the rate at which one country's currency trades for another.

IV. Canadian Historical Data on Real GDP, Inflation, and Unemployment.

1. Data on **real GDP** for Canada since 1900 reveal two patterns of variation over time:

   - a long-run upward trend - the result of long run economic growth [real GDP per capita is 9 times higher now than in 1900];
   - a sequence of short-run cyclical fluctuations around trend - the result of the business cycle. [In recessions, such as 1981-2, 1990-1, 2008 -9, real GDP actually falls.]

2. Data on the **rate of inflation** in Canada since 1920 reveal that:

   - Before 1945 the average rate of inflation was approximately ***zero*** - periods of **de**flation

[falling prices] were as common as periods of **in**flation [rising prices].
- From the 1950s to the mid-1970s there was an **upward trend** in inflation.
- Since 1980 the inflation rate has **fallen** significantly due to two episodes of "***tight money***" and resulting high unemployment - one in the early 80s and one in the early 90s.
- Since the early 1990s the inflation rate has been in the narrow range of 1-3% per year - consistent with **Bank of Canada targets**.

3. Data on **unemployment** for Canada since 1920 reveal that:

- The unemployment rate is strongly countercyclical - rising in recessions and falling in expansions.
- Unemployment was highest in the 1930s [the Great Depression] and lowest in the 1940s.
- From 1945 to the 1990s there was a gradual upward trend in unemployment.
- In the last 10 years the upward unemployment trend seems to have stopped.

V. The Methods and Approach of Macroeconomics.

- Macroeconomics employs the scientific method consisting of the formulation and testing of hypotheses.
- An hypothesis asserts the existence of a cause-and-effect relationship between one or more independent variables and a dependent variable.

Example:

The **consumption function hypothesis** asserts that total consumer spending [the ***dependent*** variable] varies directly with total disposable income of consumers [the ***independent*** variable].

- All economic hypotheses are subject to a process of empirical testing in which actual economic data are used to test the validity of the predictions of the hypothesis.
- An hypothesis whose predictions are NOT consistent with the data is rejected or modified.

VI. Macroeconomic Models.

Definition: A macroeconomic model is a simplified, conceptual description of the economy which provides a logical and consistent framework for understanding the economy.

- A macroeconomic model is formed by assembling a set of empirically-valid hypotheses linking macroeconomic variables.
- A macroeconomic model contains two types of economic variables:
  Endogenous variables - those whose values are determined **within** the model;
  Exogenous variables - those whose values are wholly determined **outside** the model.

Exogenous variables are the **input** into the model while **endogenous** variables are the **output** of the model.

Varieties of macroeconomic models.

There are two main types of macroeconomic models:

1. ***Classical models*** **("fresh-water economics" - University of Chicago)**

   Central feature: assume **prices are flexible** and adjust to ensure full-employment.

   Best for studying the behaviour of the economy in the **long run** [over 5 years];

2. ***Keynesian models*** ("**salt-water economics" - Harvard University**)

   Central feature: **prices are "sticky" or inflexible** and don't adjust in the short run to ensure full employment.

   Best for studying the behaviour of the economy in the **short run** [year to year];