

UNIT 1

Introduction

(6 Hrs) — Applied Economics (CAEC353), BCA III/VI

⚠ Please Take Care — This May Contain Errors

These notes were prepared from the course syllabus and may contain errors, omissions or over-simplifications — including in numerical examples, diagrams, and Nepal-specific facts and figures (which change over time). Please take care: cross-check every formula, number and definition with your prescribed textbook, class notes and the official syllabus before relying on it for study or examination.

1.1 Meaning of Economics — Basic Ideas

Economics is the social science that studies how individuals, firms, governments and societies choose to use scarce resources having alternative uses in order to satisfy unlimited wants. The whole subject rests on the problem of **scarcity**: resources (land, labour, capital, entrepreneurship) are limited, while human wants are unlimited. Because of scarcity every society must **choose**, and every choice has an **opportunity cost** — the value of the next best alternative given up.

- **What to produce?** — which goods and services and in what quantities.
- **How to produce?** — which technique (labour-intensive or capital-intensive).
- **For whom to produce?** — how output is distributed among members of society.

Applied economics uses these theories to solve practical problems of business, information technology and management — such as pricing an IT product, forecasting demand, understanding inflation or judging the effect of a tax or an interest-rate change.

Example 1.1 — Opportunity cost

A BCA graduate can either take a job paying Rs. 40,000 per month or spend the year on a full-time master's programme. If she chooses the master's programme, the **opportunity cost** of the first year includes the forgone salary of $\text{Rs. } 40,000 \times 12 = \text{Rs. } 480,000$ (in addition to fees).

Lesson

Cost in economics always includes the **best forgone alternative**, not only money actually paid out.

1.2 Concept and Types of Microeconomics and Macroeconomics

The word *micro* comes from the Greek *mikros* (small) and *macro* from *makros* (large). The terms were popularised by **Ragnar Frisch** (1933). Modern economics is divided into these two broad branches.

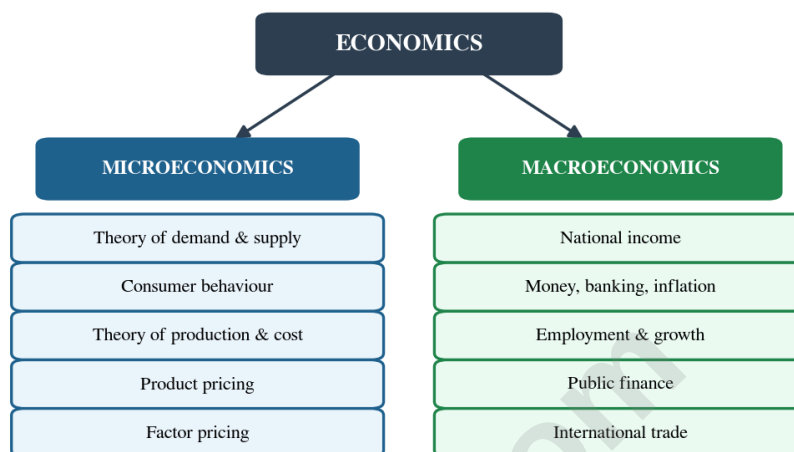


Figure 1.1 — Two branches of economics and their main topics

1.2.1 Microeconomics

Microeconomics studies the behaviour of **individual economic units** — a consumer, a household, a firm or a single market — and how they make decisions and interact. It is also called **price theory** because prices are its central concern: the price of a product, the price of a factor (wage, rent, interest, profit) and the way relative prices allocate resources. It follows a *partial equilibrium* approach (one market at a time, other things equal), and its typical tool is marginal analysis.

- **Consumer theory** — utility, demand, consumer equilibrium (Unit 3).
- **Production and cost theory** — how firms combine inputs and what it costs (Unit 4).
- **Theory of product pricing** — perfect competition, monopoly, monopolistic competition, oligopoly (Unit 5).
- **Theory of factor pricing** — determination of wages, rent, interest and profit.
- **Welfare economics** — efficiency and equity of resource allocation.

1.2.2 Macroeconomics

Macroeconomics studies the economy **as a whole** — aggregates such as national income, total employment, general price level, total consumption, saving and investment, money supply and the balance of payments. It is also called **income and employment theory** and follows a *general equilibrium* approach. Its modern development is associated with **J. M. Keynes** and his *General Theory* (1936), written after the Great Depression.

- **Theory of national income** — measurement and determination of GDP (Unit 6).
- **Theory of employment and growth** — causes of unemployment and long-run growth.
- **Theory of money, banking and prices** — money supply, inflation, central banking (Unit 7).
- **Public finance** — government taxation, spending and public debt.
- **International economics** — trade, exchange rates, balance of payments (Unit 7).

1.2.3 Other Useful Classifications

Basis	Types	Meaning
Method of study	Positive economics	Describes 'what is' — statements that can be tested with facts (e.g., 'a rise in price reduces quantity demanded').
	Normative economics	Deals with 'what ought to be' — value judgements (e.g., 'the government should reduce inequality').
Reasoning	Deductive / Inductive	Deduction moves from general principles to specific cases; induction from observed facts to general laws.
Time analysis	Static / Dynamic	Static: equilibrium at a point in time. Dynamic: changes over time and the path to equilibrium.

Note: The assumption ceteris paribus ('other things remaining equal') is used throughout microeconomics to isolate the effect of one variable.

1.3 Distinction between Microeconomics and Macroeconomics

Basis	Microeconomics	Macroeconomics
Meaning	Study of individual units — consumer, firm, industry.	Study of the economy as a whole — aggregates.
Other names	Price theory; theory of resource allocation.	Income and employment theory; theory of aggregates.
Central problem	Price determination and efficient allocation of resources.	Level of income, output, employment and general price level.

Basis	Microeconomics	Macroeconomics
Approach	Partial equilibrium.	General equilibrium.
Main tools	Demand, supply, marginal utility, marginal cost, elasticity.	Aggregate demand, aggregate supply, money supply, national income.
Key variables	Individual price, quantity, cost, profit.	GDP, unemployment rate, inflation rate, interest rate, exports/imports.
Assumptions	Full employment and given national income are often assumed.	Consumer preferences and the structure of markets are taken as given.
Main thinkers	Marshall, Hicks, Chamberlin, Robinson.	Keynes, Friedman, Samuelson, Solow.
Examples	Why did the price of mobile data fall? How much output will a firm produce?	Why is inflation rising? How can unemployment be reduced?

Interdependence and the Fallacy of Composition

The two branches are **complementary, not competing**. Macro aggregates are built from the decisions of millions of micro units, and macro conditions (interest rates, taxes, inflation) influence every individual decision. Yet what is true for one individual is not always true for the economy as a whole — this is the **fallacy of composition**.

Example 1.2 — Paradox of thrift

If one household saves more, its wealth rises (micro truth). If *all* households save more and spend less, total demand falls, firms cut production and income and employment fall — so **total saving may actually fall** (macro result).

Lesson

A micro-level truth cannot be automatically generalised to the whole economy; macroeconomics studies the aggregate outcome.

1.4 Goals and Instruments of Macroeconomics

Macroeconomic policy is the deliberate use of **instruments** by the government and the central bank to achieve certain **goals** (objectives) for the whole economy.

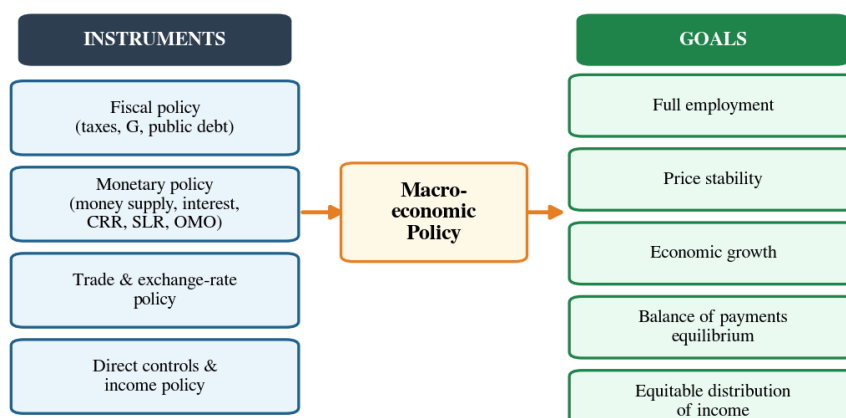


Figure 1.2 — Instruments used by policy-makers to reach macroeconomic goals

1.4.1 Goals (Objectives)

Goal	Explanation
Full employment	Everyone willing and able to work at the prevailing wage finds a job; unemployment is limited to frictional/natural levels.
Price stability	Keeping inflation low and predictable; avoiding both high inflation and deflation.
Economic growth	A sustained rise in real GDP and real per capita income over time.
Balance of payments equilibrium	Avoiding large, persistent deficits in external transactions; stable foreign-exchange reserves and exchange rate.
Equitable distribution of income	Reducing poverty and inequality; inclusive growth.
Other goals	Financial stability, sustainable use of resources and environment, regional balance.

Note: Goals can conflict. For example, reducing unemployment by boosting demand may increase inflation (the short-run Phillips-curve trade-off).

1.4.2 Instruments

(a) Fiscal Policy

Use of government **taxation**, **public expenditure** and **public borrowing (public debt)** to influence aggregate demand and income. In a recession the government may raise spending or cut taxes (expansionary); during inflation it may cut spending or raise taxes (contractionary). In Nepal the budget is presented every year and the fiscal year begins in Shrawan.

(b) Monetary Policy

Action by the central bank to control the **money supply and credit** and the rate of interest. Quantitative tools include the bank/policy rate, cash reserve ratio (CRR), statutory liquidity ratio (SLR) and open market operations (OMO); qualitative tools include moral suasion and credit rationing. In Nepal, Nepal Rastra Bank announces the Monetary Policy every year.

(c) Other Instruments

- **Trade and exchange-rate policy** — tariffs, quotas, export incentives, exchange-rate management.
- **Income policy and direct controls** — minimum wages, price controls, subsidies, rationing.
- **Structural/supply-side policy** — investment in infrastructure, education, technology and institutional reform.

Example 1.3 — Matching instruments to goals

Inflation is 9% and the government wants it below 5%. Which instruments can be used?

Solution

- **Monetary:** raise policy rate, raise CRR/SLR, sell securities in OMO → credit and money supply fall → demand falls.
 - **Fiscal:** reduce government spending, raise taxes → disposable income and demand fall.
 - **Supply-side:** improve supply chains and imports of essential goods to lower cost pressures.
- Side-effect to note: these policies may slow growth and employment (goal conflict).

Key Takeaways — Unit 1

- ✓ Economics arises from scarcity and choice; every choice involves opportunity cost.
- ✓ Microeconomics studies individual units (price theory, partial equilibrium); macroeconomics studies aggregates (income and employment theory, general equilibrium).
- ✓ The two branches are interdependent; the fallacy of composition shows that micro truths may not hold for the whole economy.
- ✓ Main macro goals: full employment, price stability, growth, BOP equilibrium and equity.
- ✓ Main instruments: fiscal policy, monetary policy, trade/exchange-rate policy and direct/supply-side measures.

— End of Unit 1 —

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