Part 1: Introduction and Measurement

Chapter 1: Introduction

Topics:

- What is macroeconomics?
- What do we study in macroeconomics?
- GDP, economic growth, business cycles.
- Macroeconomic models.
- Understanding recent and current macroeconomic events.

I.1. What is Macroeconomics?

- The study of the behaviour of LARGE COLLECTIONS (**AGGREGATION**) of economic agents.

- Use economic MODELS to study ***long-run growth*** and ***business cycles***

I.2. What do we study in macroeconomics

- Growth= increase in the total amount of production (goods and services) of an economy over time. The production is captured by GDP;

- Business cycle: fluctuation in the level of economic activities in an economy over time

- labour market: unemployment, job search, wage;

- inflation: increase in the general level of prices;

I.2. What do we study in macroeconomics (Next)

- International relations: imports, exports, exchange system, balance of payments;

- Government policies: Fiscal policy, monetary policy

I.3. Aggregation: GDP, Economic Growth, and Business Cycles

- Gross Domestic Product (GDP): the quantity of goods and services produced within a country's borders over a particular period of time.

- GDP also represents the aggregate income earned by those who contribute to production in an economy.

- GDP adjusted by the size of the population gives an indication of the level of development of an economy------ **GDP per capita.**

I.3. Aggregation: GDP, Economic Growth, and Business Cycles (Next)

- Economic growth: Let y_t be the per capita GDP of an economy in period t.

The growth rate of y from period t-1 to period t is given by:

$$g_t = \frac{y_t}{y_{t-1}} - 1$$

I.3. Aggregation: GDP, Economic Growth, and Business Cycles (Next)

- Two possible transformations:
  - Log transformation: a more useful way to determine the growth is the use of natural log.

If x is a small number, then $\ln(1+x) \approx x$

so if g_t is small, then:

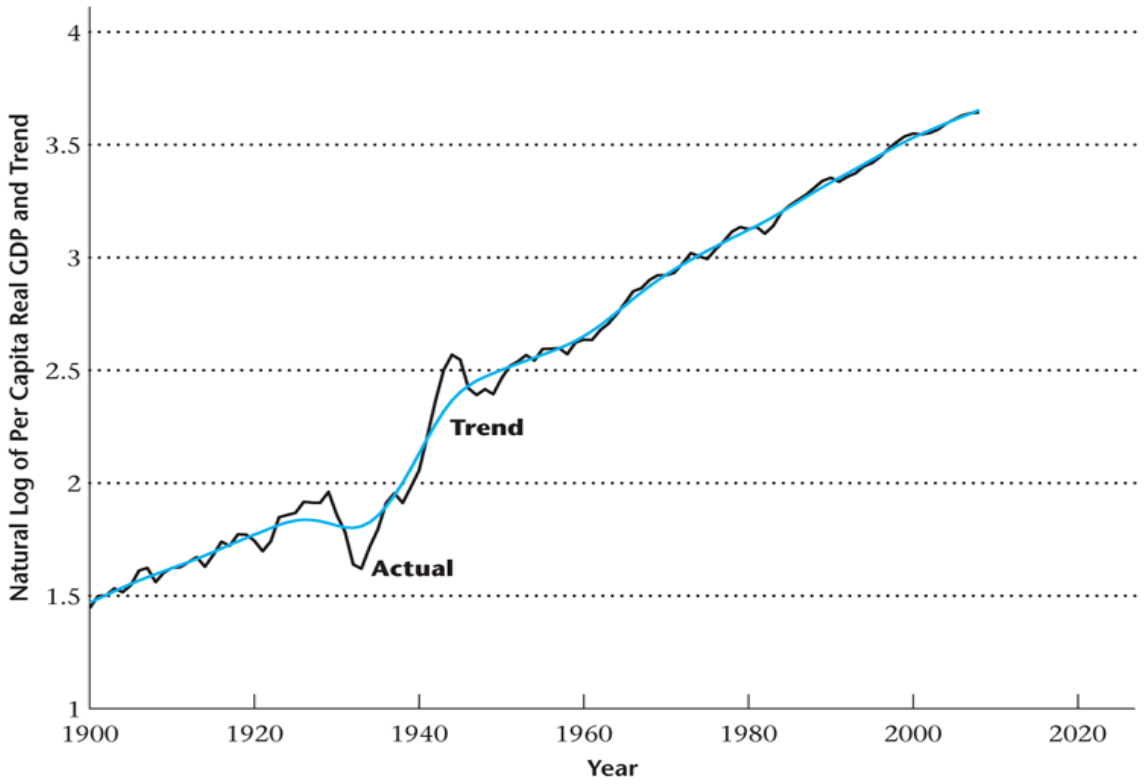
$$\ln(1+g_t) \approx g_t$$

$$\Rightarrow \ln(y_t) - \ln(y_{t-1}) \approx g_t$$

I.3. Aggregation: GDP, Economic Growth, and Business Cycles (Next)

❖ The time series of GDP can be separated into *trend* and *business cycle* components.

Figure 1.3: Natural Logarithm of Per Capita Real GDP and Trend



I.4. Macroeconomic Models

- Why models in Macroeconomics?
- Because tt is hard to do experiments in economics. We rely on **MODELS**.

- The basic structure of a macroeconomic model
  - Players: Consumers and firms
  - Goods: for consumption (and investment)
  - Preferences

I.4. Macroeconomic Models (next)

- Technology: for firms to produce goods
- Resources
- Rational Behavior: Optimization
- Competitive Equilibrium: price-taking, market clearing
- Hypotheses and Hypothesis Testing

I.4. Macroeconomic Models (next)

- Microeconomic Principles: Why we cannot ignore them?
- Because microeconomic Reactions affect Macroeconomic Outcomes?
  - Policy change
- Rational Expectations and the Lucas Critique
  - Macroeconomic policy analysis could be done in a sensible way only if microeconomic behavior is taken seriously

I.5. Disagreement in Macroeconomics

- Exogenous and Endogenous Growth Models generally accepted
- Business Cycle theory is another story
  - Keynesian Sticky-Price Models
  - Money Surprise Theory
  - Real Business Cycle (RBC) Models
  - Keynesian Coordination Failure Models

Outline: What Do We Learn from Macro?

- Fundamentals: Preferences and Productive Capacity
- The Efficiency of Market Outcomes: "Invisible Hand"
- The Cost of Government Activities: Tax cut is not a free lunch.
- Expectations matter

What Do We Learn from Macro?

- Technological Progress brings about long-run growth
- Money Neutrality
- International trade could be a source of shocks to the domestic economy.
- In the long-run, inflation is caused by growth in the money supply.

What Do We Learn from Macro?

- Business Cycles are remarkably similar, but they can have different causes
- Unemployment can be a valuable use of time: search theory