V. INTRODUCTION TO MACROECONOMICS

A. The Importance of Economic Growth

1. Economic growth is the percentage increase in real gross domestic product (GDP).

2. Long-run versus short-run economic growth

   a. Long-run economic growth is the average growth rate in real GDP over a 10-30 year period.

   b. Short-run economic fluctuations is the growth rate in real GDP over a quarter (four months) or year.
      i. During a recession or depression, the level of real GDP falls and thus the growth rate is negative.
      ii. During an expansion, the level of real GDP rises and thus the growth rate is positive.

3. The significance of long-run economic growth

   Q: Why should we care about real GDP?

   Q: Why should we care about the growth rate in real GDP?

   Q: How do growth rates compare across countries?
B. National Income and Product Accounts

1. Preliminary notes

   a. Nominal vs. real -- nominal statistics are measured in current dollars (in the current market prices), while real statistics are measured in constant dollars (adjusted so that the values have the same purchasing power in both time periods being compared).

   b. Levels vs. growth rates -- statistics recorded in levels describes the amount or total, while statistics recorded in growth rates describes the rates of change.

   c. Flows vs. stocks -- flow variables measure amounts for a given time period (e.g. month, quarter, year), while stock variables measure amounts at a specific instant.

2. Gross domestic product (GDP) is the value of all final goods and services produced in an economy during a particular time period. It can be measured three different ways:

   a. The production approach to measuring GDP adds up the production of goods and services in various industries. To avoid double-counting, one records only the value added at each level of production.

   b. The income approach to measuring GDP adds up the payments to all the inputs or factors of production. The two main components are labor (wages, salaries and fringe benefits) and capital income (profits, interest and rents).
c. The spending approach to measuring GDP adds up the expenditures on goods and services by different groups.

\[ Y = C + I + G + X \]

where \( Y = \) Gross domestic product

\( C = \) Consumption is spending by domestic households on final goods and services (consumer durables + nondurable goods + services).
- Constitutes around 2/3 of all spending
- The most stable component of spending

\( I = \) Total investment is purchases of new capital equipment (business and residential fixed investment) and inventory investment.
- Investment is the flow of new capital that is added to the existing stock of capital during a certain time period. \( I = K_{t+1} - K_t \)
- Positive inventory investment is an accumulation of inventory.
- The most volatile component of spending.

\( G = \) Government spending is purchases of goods and services by the government.

\( X = \) Net exports is exports minus imports.


d. A simple circular flow diagram
3. Investment and saving

   a. National saving is defined as total income minus private consumption and government purchases.

      \[ S = Y - C - G \]

      This definition tells us that increases in either private consumption or government spending lower national saving.

   b. Investment-saving identity:

      \[ S = I + X \]

      This identity tells us that national saving (S) equals the sum of private investment (I) and net exports (X).

4. The price indices and inflation

   a. A price level or index is created and maintained in order to deflate statistics in current dollars into constant dollars so that comparisons can be made through time and across countries.

   b. There are two types of price indexes: variable-weight and fixed-weight.

      i. A variable-weight price index computes how much today's goods and services would cost in the base year.

      ii. A fixed-weight price index computes how much a fixed basket of goods and services costs today vs. the base year.

   c. The consumer price index (CPI) is a fixed-weight price index, while the GDP deflator is a variable-weight price index.

   d. The inflation rate is the percentage change in the price index.