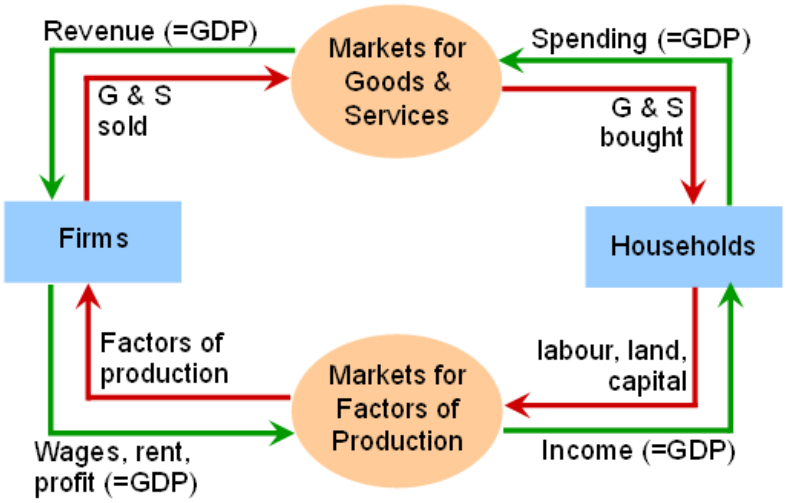
Chapter 5 - *Measuring National Income*

Macroeconomics – the study of economy wide issues such as inflation, savings, unemployment and economic growth.

Income and Expenditure

- *Gross Domestic Product* (**GDP**)
  - Measures two things at once:
    - Total income of everyone in the economy
    - Total expenditure on the economy's output of goods and services
  - For the economy as a whole ***income = expenditure***

- *Circular Flow Diagram* (**CFD**)
  - Is a simple depiction of macroeconomics
  - Illustrates GDP as spending, revenue, factor payments, and income
  - Includes:
    - **Factors of production:** inputs like labour, land, capital, and natural resources
    - **Factor payments:** payments to the factors of production (*e.g. wages, rent…*)



  - The CFD omits:
    - **The government:** collects taxes and purchases of goods and services
    - **The financial system:** matches savers supply of funds with borrowers demand for loans
    - **The foreign sector:** trades goods and services, financial assets, and currencies with the country's residents

- *GDP is*….
  - The market value of all final goods and services produced within a country in a given period of time.

    - **The Market value** …
      - Goods are valued at their market price. Things without a market value are excluded (*e.g. housework, mowing your lawn, etc.*).
    - … **Of all** …
      - It includes all goods produced in a market that are sold legally
    - … **Final** …
      - Goods and services intended for the end user
      - Intermediate good used as components/inputs in the production of other goods are not included
      - Value of intermediate goods is already included in the value of final goods
    - … **Goods and Services** …
      - GDP includes both tangible goods (*food, clothing, cars, etc.*) and intangible services (*haircuts, dentist visits, housecleaning, etc.*)
    - … **Produced** …
      - The GDP only includes items that are being produced currently. For example, if you buy a car from the factory floor, then it is included in the GDP. If you sell that car in later years, then it is not included. Otherwise it will be double counted.
    - … **Within a Country**…
      - only goods produced within a certain country are counted
    - … **In a Given Period of Time.**
      - GDP counts the value of production that takes place in a certain interval of time (i.e. yearly, quarterly, etc.)

- *Components of GDP*:
  - GDP is total spending. The four components are:
    - **Consumption** (**C**): spending by households on goods and services, with the exception of purchases of new housing
    - **Investment** (**I**): spending on capital equipment, inventories, and structures, including household purchases of new housing
    - **Government Purchases** (**G**): spending on goods and services by local, territorial, provincial, and federal governments
    - **Net Exports** (**NX**): the value of a nation's exports minus the value of its imports; also called the *trade balance*
    - These components add up to GDP (*denoted Y*):

$$Y = C + I + G + NX$$

- *Real Versus Nominal GDP*
  - Inflation can distort economic variables such as GDP, so there are two versions:

    - **Nominal GDP**: output valued at current prices. Not corrected for inflation.
      - The change in nominal GDP reflects both prices and quantities

    - **Real GDP**: output valued at constant prices of a *base year*. Real GDP is corrected for inflation.
      - The change in real GDP is the amount that GDP would change if prices were constant (*i.e. if zero inflation*)
      - Hence why real GDP is corrected for inflation

- *GDP Deflator*
  - The GDP deflator is the measure of the overall level of prices

$$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

  - Called deflator because it takes the inflation out of the nominal GDP
  - One way to measure a country's *inflation rate* is to compute the percentage increase in the GDP deflator from one year to the next.

$$\text{Inflation rate Yr 2} = \frac{\text{GDP Deflator Yr 2 - GDP Deflator Yr 1}}{\text{GDP Deflator Yr 1}} \times 100$$

- *GDP and Economic Well-Being*
  - Real GDP per capita is the main indicator of the average person's standard of living
  - But GDP is not the perfect indicator of well-being
  - Robert Kennedy's criticism of GDP:

    - **Gross Domestic Product**…
      "…. does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our courage, nor our wisdom, nor our devotion to our country. It measures everything, in short, except that which makes life worthwhile, and it can tell us everything about America except why we are proud that we are Americans."
      - ***Senator Robert Kennedy, 1968***

- *GDP Does Not Value*
  - The quality of the environment
  - Leisure time
  - Non-market activities (*e.g. childcare for your own child*)
  - An equitable distribution of income

- *Why We Care About GDP*
  - Having a large GDP enables a country to afford better schools, a cleaner environment, health care, etc…
  - Many indicators of the quality of life are positively correlated with GDP (*e.g. life expectancy*)

- *Gross National Product* (**GNP**)
  - Measures total income earned by a country's residents regardless of where it is earned
  - Income earned in Canada by foreigners is not included, but income by Canadians abroad is included
  - While GDP best measures Canadian economic activity, GNP best measures total income of Canadians

GDP - GNP = income earned in Canada by foreigners – income earned abroad by Canadians

- *Net National Product* (**NNP**)
  - GNP minus depreciation of stock of structures and equipment (Corporate Cost Allowance or CCA)