

Introduction to Macroeconomics

The Components of the Macroeconomy

- Four groups of the macroeconomic agents:
 1. *Households*
 2. *Firms*
 3. *The government*
 4. *The rest of the world*
- Households and firms make up the private sector, the government is the public sector, and the rest of the world is the foreign sector.

The Components of the Macroeconomy

1. *Households*
2. *Firms*
3. *The government*
4. *The rest of the world*

1 + 2 + 3 = the Closed Economy.

1 + 2 + 3 + 4 = the Open Economy.

The Role of the Government in the Macroeconomy

- **fiscal policy (FP)** is carried out by the government, concerning taxes and government spending.
 - Expansionary FP, e.g. cut taxes, raise spending to boost the economy.
 - Contractionary FP, e.g. raise taxes, cut spending to slow down the economy.

(to be continued)

The Role of the Government in the Macroeconomy

- **monetary policy (MP)** is carried out by the central bank to control short-term interest rates (i) via money supply (MS).
 - Expansionary MP, e.g. increase MS to reduce i to boost the economy.
 - Contractionary MP, e.g. decrease MS to raise i to slow down the economy.

(to be continued)

The Circular Flow Diagram

- **circular flow** A diagram showing the (money) flows in and out of the sectors in the economy.
- **transfer payments** Cash payments made by the government to people who DO NOT supply goods, services, or labor in exchange for these payments. They include Social Security benefits, veterans' benefits, and welfare payments.

The Circular Flow of Payments

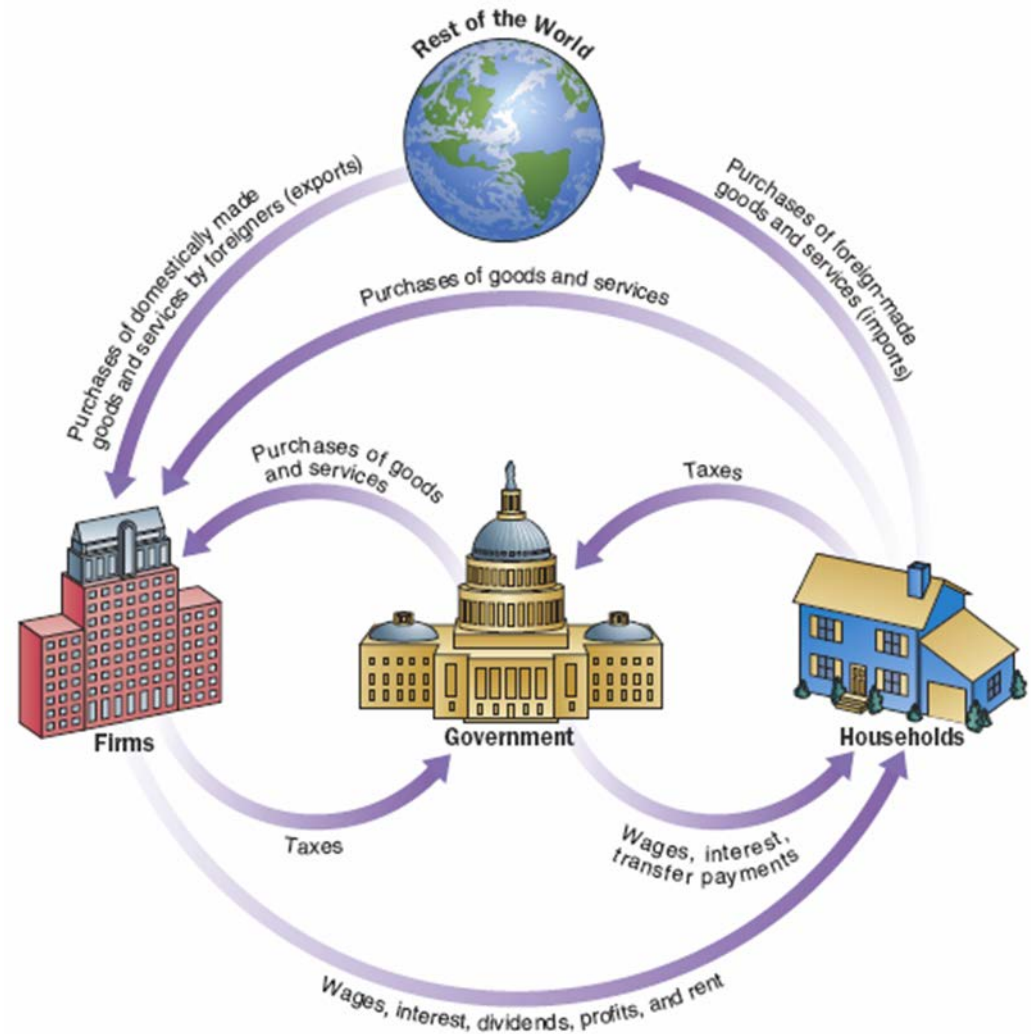
Households receive income from firms and the government, purchase goods and services from firms, and pay taxes to the government. They also purchase foreign-made goods and services (imports).

Firms receive payments from households and the government for goods and services; they pay wages, dividends, interest, and rents to households and taxes to the government.

The government receives taxes from firms and households, pays firms and households for goods and services—including wages to government workers—and pays interest and transfers to households.

Finally, people in other countries purchase goods and services produced domestically (exports).

Note: Although not shown in this diagram, firms and governments also purchase imports.



The Three Markets *(1 of 6)*

- We now consider the three markets in which the macroeconomic agents interact.
 - The goods-and-services market
 - The labor market
 - The money (financial) market

The Three Markets *(2 of 6)*

In the Goods-and-Services Market,

- Households and the government purchase goods and services from firms.
- Firms purchase goods and services from each other and also *supply* to the market.
- Households, the government, and firms *demand* from this market.
- The rest of the world buys from and sells to the market.

Goods-and-Services Market

- Buyers who come with Demand
 - Households, Firms, Government, Abroad

- Sellers who come to Supply
 - Firms, Abroad

The Three Markets *(3 of 6)*

In Labor Market,

- Households *supply* labor, and firms and the government *demand* labor.
- Labor is also supplied to and demanded from the rest of the world.

- Buyers/Demand: Firms, Government, Abroad
- Sellers/Supply: Households, Abroad

The Three Markets (4 of 6)

Money Market

- Households *supply* funds to the money market
 - To earn income from dividends on stocks and interest on bonds.
- Households also *demand* (borrow) funds from this market
 - To finance their consumption or to smooth consumption.
 - Why do we smooth consumption? >>> We want to max. our utility.
- Firms borrow to build new facilities by issuing corporate bonds or stocks.

The Three Markets *(5 of 6)*

Money Market

- The government borrows to finance its projects by issuing government bonds.
- The rest of the world borrows from and lends to the money market.
- Borrowing and lending is coordinated by financial institutions, which take deposits from one group and lend them to others.

The Money Market

- Borrowers who come with Demand for Money
 - Households, Firms, Government, Abroad

- Lenders who come to Supply Money
 - Households, Abroad

The Three Markets *(6 of 6)*

Money Market

- **Treasury or government bonds** Promissory notes issued by the government when it borrows money.
- **corporate bonds** Promissory notes issued by corporations when they borrow money.
- **shares of stock** give the holder a share in the firm's ownership and therefore in the firm's profits.
- **dividends** The portion of a firm's profits that the firm pays out each period to its shareholders.

The Money Market

Bond vs Fixed Deposit (FD)

- Both are secure and give interest as returns.
- Bond constitutes Debtor-Creditor relationship, but FD does not.
 - FD is based on a contractual agreement.
- Bond is backed by assets, but FD is not.

Measuring National Output and National Income

Stock vs Flow Variables

- **A flow is a quantity measured with reference to a period of time.** Thus, flows are defined with reference to a length of time, e.g., hours or years. It has time dimension.
- National income is a flow. It measures flows of goods and services which become available to a country during a year.

Stock vs Flow Variables

- Other examples of flows are: expenditure, savings, depreciation, interest, exports, imports, change in inventories (not mere inventories), change in money supply, lending, borrowing, rent, profit, etc.
- These variables are measured over a period of time.

Stock vs Flow Variables

- **A stock is a quantity measured at a particular point of time**, e.g., 4 p.m., 1st January, Monday, 2010, etc. A stock has no time dimension.
- Capital is a stock variable. On a particular date (say, 1st April, 2011), a country owns stocks of machines, buildings, accessories, raw materials, etc.

Stock vs Flow Variables

- Examples of stocks are: wealth, foreign debts, loan, inventories (not change in inventories), opening stock, money supply (not change in money supply), population, etc.
- These variables are measured at a specific date and time.

Gross Domestic Product

gross domestic product (GDP)

The total market value of all final goods and services produced within a given period by factors of production located within a country.

- GDP concerns FINAL goods and services.
- GDP is produced with a specific period.
- GDP is produced by inputs LOCATED in the country.

Final Goods and Services *(1 of 2)*

- **final goods and services** Goods and services produced for final use.
- **intermediate goods** Goods that are produced by one firm for use or for resale by another firm.
- **value added** The difference between the value of goods as they leave a stage of production and the cost of the goods as they entered that stage.

Final Goods and Services *(2 of 2)*

- In calculating GDP, we can sum up the value added at each stage of production OR we can take the value of final sales.
- We do not use the value of total sales (sales of goods in all stages of production) in an economy to measure how much output has been produced.

TABLE 6.1 Value Added in the Production of a Gallon of Gasoline (Hypothetical Numbers)

Stage of Production	Value of Sales	Value Added
(1) Oil drilling	\$ 3.00	\$ 3.00
(2) Refining	3.30	0.30
(3) Shipping	3.60	0.30
(4) Retail sale	4.00	<u>0.40</u>
Total value added		\$ 4.00

Value of goods as they leave a stage of production

Cost of goods as they enter that stage

Exclusion of Used Goods and Paper Transactions

- GDP is concerned only with new, or current, production. Old output is not counted in current GDP because it was already counted when it was produced.
- GDP does not count transactions in which money or goods change hands but in which no new goods and services are produced.

Exclusion of Output Produced Abroad by Domestically Owned Factors of Production

- GDP is the value of output produced by factors of production located within a country.
- Such factors can be owned by foreigners.
- **gross national product (GNP)** The total market value of all final goods and services produced within a given period by factors of production owned by a country's citizens, regardless of where the output is produced.

GNP vs GDP of the US

