Study Guide

Chapter 5 Measuring National Income and Product

GDP (Gross Domestic Product) is used to measure two things:
(1) the total income of all members in an economy, and
(2) the total spending on the nation's output (goods and services)

1. GDP

a) market value = (market price) x (quantity produced)

Market price is used to compute the market value because it is the best indicator of the value of goods and services.

b) final goods and services – include all of the goods and services in a finished format.

- Only new products are included.
- Used products, intermediate products, financial securities are NOT included.

c) within a country – products made inside the country are included in GDP.
Products made outside the country are not included in GDP.

Another concept, **GNP (Gross National Product),** emphasizes on ownership. GNP is the market value of all final goods and services owned by its citizens in a given period.

d) in a given period. In the U.S., GDP is computed by the Bureau of Economic Analysis every quarter and every year. Thus you can find Quarterly GDP and Yearly GDP.

2. There are two ways to compute GDP

- Expenditure approach (add all spending together = GDP)
- Income approach (add all incomes together = GDI gross domestic income)

In principle, GDP and GDI must have exactly the same value due to the fact that what buyers pay (spending) must be what sellers receive (income).

3. Expenditure approach GDP = C + I + G + NX

<u>C: personal consumption</u> = durable goods + nondurable goods + services

<u>I: private investment</u> = nonresidential investments + residential investments + changes in inventory.

Nonresidential investments include equipments, machineries, and business construction. The Walgreens built in the middle of Douglas (including the parking lots) is included in nonresidential investments.

Residential investments include houses, apartment buildings, and other constructions for residence purpose.

Changes in inventory = production – sales.

Once a product reaches its finished stage and is ready for sale, its value is added in changes in inventory, through "production." When this product is sold later, the same value will be subtracted from the changes in inventory. For example, the Ford factory finished a Ford Thunderbird that was worth $27,000 in January 2008. In March, the same car was sold to a consumer by a car dealer for $30,000.
In this case, US GDP first increased by $27,000 in January 2008 (the value entry was in changes in inventory under production). In March, after the car was sold, the changes in

inventory dropped by $27,000 because of "- sales'); and the consumption increased by $30,000 (durable goods $27,000 and service $3,000). In net, US GDP increased by $30,000.

G: Government spending includes the federal government, state governments, and local governments.

NX: Net Exports = exports – imports.

4. Gross Domestic Income – all income payments made in the country in a given period. These income payments include wage, rent, interests, and profits. Note that if a foreign citizen work in the U.S., his/her income is added to the US GDI. However, when American basketball players play in Canada, their incomes are not included in the U.S.GDI, because the incomes are not made in the U.S.

5. Nominal GDP vs. Real GDP
Nominal GDP is the GDP measured by current year's price.
Real GDP is the GDP measured by base year's price.
For example,
The nominal GDP of 2005 = (price of 2005) x (quantity of 2005)
The nominal GDP of 2006 = (price of 2006) x (quantity of 2006)
As for real GDP, if the base year is 2000, then
The real GDP of 2005 = (price of 2000) x (quantity of 2005)
The real GDP of 2006 = (price of 2000) x (quantity of 2006)

Since real GDP keeps the prices constant, if the value of real GDP increase, it means the total amount of products increase. Contrast to nominal GDP, since the prices are not fixed, when the value of nominal GDP increase, we cannot tell if the increase caused by the increase in prices, quantities, or both.

6. GDP deflator (or Price level index)
GDP deflator is an indicator of price level. Since nominal GDP contains the changes in prices while real GDP doesn't, the ratio of nominal GDP to real GDP shows the changes in prices.

GDP deflator = (nominal GDP / real GDP) x 100