

## EE212 Principles of Macroeconomics, 2/2017 (Sec. 046401 - Sicha)

## Solution for Question 2

2. Define GDP and explain why the value of production, income, and expenditure are the same for an economy.

**ANSWER.** “**Gross Domestic Product, GDP, is the market value of all the final goods and services produced within a country in a given time period.** Only final goods and services are included in GDP; intermediate goods and services are not included.

According to the Production approach,  $Y = \sum_i P_i Q_i$  = the sum of value of final goods and services produced with in a country in a given time period.  $P_i$  is the price of final goods or service i and  $Q_i$  is the quantity of final goods and service i. In practice, many goods can be used as both final goods and intermediate goods. Including intermediate goods in calculating GDP will result in double-counting. To avoid double counting problem, we may calculate GDP by using value added approach; where  $Y$  = the sum of value added in each state of production.

Expenditures are consumption expenditure (C), investment (I), government expenditure on goods and services (G), and net exports of goods and services (NX). Investment is the purchase of new capital goods and additions to inventories. Total expenditure is equal to  $C + I + G + NX$ .

Firms pay out the revenue they receive to households as payment for labor, capital, land, and entrepreneurship. On the income side,  $Y =$  Compensation of employees + Net interest + Rental income + Corporate profits + Proprietors' income + depreciation + Indirect Taxes - Subsidies. These payments are households' income. We call total income,  $Y$ .

Theoretically, the value of output is equal to expenditure spent on it and is equal to total income of factor of production used in producing it. The circular flow shows that the value of final goods and services is equal to total expenditure and is equal to total income of the household.”