



# **EE 212 PRINCIPLES OF MACROECONOMICS (SECTION 046402)**

Lecture #4

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# PRINCIPLES OF MACROECONOMICS

Semester 2, 2011

## Measuring National Output and National Income

### 1. Gross Domestic Product

Overview

Final Goods and Services

Exclusion of Used Goods and Paper Transactions

Exclusion of Output Produced Abroad by Domestically Owned Factors of Production

### 2. Calculating GDP

The Sum of Value-Added Approach

The Expenditure Approach

The Income Approach

### 3. Nominal versus Real GDP

Calculating Real GDP

Calculating the GDP Deflator

The Problems of Fixed Weights

### 4. Limitations of the GDP Concept

GDP and Social Welfare

The Underground Economy

Gross National Income per Capita

### 5. Applications



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## 2. Calculating GDP

### The Expenditure Approach



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- Personal consumption expenditures ( $C$ ):
- Gross private domestic investment ( $I$ ):
- Government consumption and gross investment ( $G$ )
- Net exports: Exports ( $EX$ ) minus Imports ( $IM$ )

$$GDP = C + I + G + (EX - IM)$$



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## Components of U.S. GDP, 2007: The Expenditure Approach

	Billions Of Dollars	Percentage of GDP
<b><i>Personal consumption expenditures (C)</i></b>	9,734.2	70.3
Durable goods	1,078.2	7.8
Nondurable goods	2,833.2	20.5
Services	5,822.8	42.1
<b><i>Gross private domestic investment (I)</i></b>	2,125.4	15.4
Nonresidential	1,481.8	10.7
Residential	640.7	4.6
Change in business inventories	2.9	0.0
<b><i>Government consumption and gross investment (G)</i></b>	2,689.8	19.4
Federal	976.0	7.1
State and local	1,713.8	12.4
<b><i>Net exports (EX – IM)</i></b>	–708.0	– 5.1
Exports (EX)	1,643.0	11.9
Imports (IM)	2,351.0	17.0
<b><i>Gross domestic product</i></b>	<u>13,841.3</u>	<u>100.0</u>

Note: Numbers may not add exactly because of rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.



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## Personal Consumption Expenditures (C)

Durable goods:

Nondurable goods:

Services:.



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## Gross Private Domestic Investment ( $I$ )

Depreciation:

Gross investment:

Net investment =



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**Government consumption and gross investment ( $G$ )**

**Net Exports ( $EX - IM$ )**