

GDP: Measuring Total Production and Income

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Increases in GDP Help Revive American Airlines



The business cycle does not affect all industries in the same way. For example, some trucking firms experienced slow sales during 2006 while airlines were prospering.

Learning Objectives

- 7.1 Explain how **total production** is measured.
 - 7.2 Discuss whether **GDP** is a good **measure of well-being**.
 - 7.3 Discuss the difference between **real GDP** and **nominal GDP**.
 - 7.4 Become familiar with **other measures of total production and total income**.
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Does GDP Measure What We Want It to Measure?

Shortcomings in GDP as a Measure of Total Production

Household Production

Household production refers to goods and services people produce for themselves.

The Underground Economy

Underground economy Buying and selling of goods and services that is concealed from the government to avoid taxes or regulations or because the goods and services are illegal.

Underground Economy:

Three basic reasons :

- 1. Illegal goods and services: Drugs*
- 2. They want to avoid paying taxes on income they earn*
- 3. Avoid government regulations.*

How much buy and sell are underground?

About 1.3 trillion, 10% of GDP in US

In some developing countries, it could be more than 50%.

Does GDP Measure What We Want It to Measure?

Shortcomings of GDP as a Measure of Well-Being

The Value of Leisure Is Not Included in GDP

GDP Is Not Adjusted for Pollution or Other Negative Effects of Production

GDP Is Not Adjusted for Changes in Crime and Other Social Problems

GDP Measures the Size of the Pie but Not How the Pie Is Divided Up

Real GDP versus Nominal GDP

Calculating Real GDP

Real GDP The value of final goods and services evaluated at base-year prices.

Nominal GDP The value of final goods and services evaluated at current-year prices.

Solved Problem | 7-3**Calculating Real GDP**

	2000		2009	
PRODUCT	QUANTITY	PRICE	QUANTITY	PRICE
Eye examinations	80	\$40	100	\$50
Pizzas	90	11	80	10
Textbooks	15	90	20	100

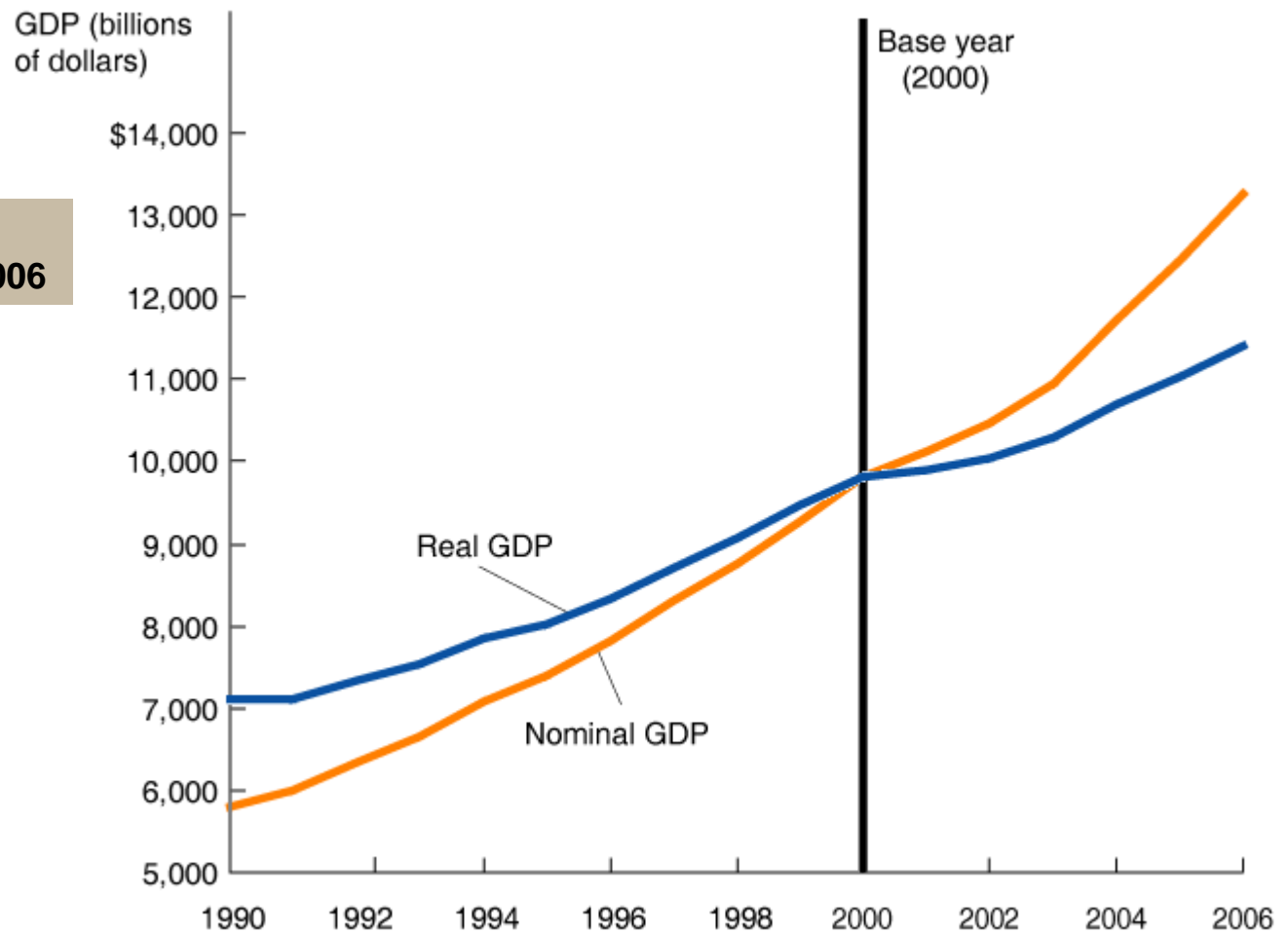
PRODUCT	2009 QUANTITY	2000 PRICE	VALUE
Eye examinations	100	\$40	\$4,000
Pizzas	80	11	880
Textbooks	20	90	1,800

Real GDP versus Nominal GDP

Comparing Real GDP and Nominal GDP

FIGURE 7-3

**Nominal GDP and
Real GDP, 1990–2006**



Real GDP versus Nominal GDP

The GDP Deflator

Price level A measure of the average prices of goods and services in the economy.

GDP deflator A measure of the price level, calculated by dividing nominal GDP by real GDP and multiplying by 100.

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

The more price increases relative to the increase in production, the higher the nominal GDP, the bigger the GDP deflator.

Real GDP versus Nominal GDP

The GDP Deflator

	2005	2006
NOMINAL GDP	\$12,456 billion	\$13,247 billion
REAL GDP	\$11,049 billion	\$11,415 billion

FORMULA	APPLIED TO 2005	APPLIED TO 2006
$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$	$\left(\frac{\$12,456 \text{ billion}}{\$11,049 \text{ billion}} \right) \times 100 = 113$	$\left(\frac{\$13,247 \text{ billion}}{\$11,415 \text{ billion}} \right) \times 100 = 116$

$$\frac{116 - 113}{113} = 2.7\%$$