Chapter 7 REVIEW

Textbook, question 7-13 **Which of the following are actually included in this year's GDP? Explain your answer in each case.**

a. Interest on an AT&T bond.
b. Social security payments received by a retired factory worker.
c. The services of a family member in painting the family home.
d. The income of a dentist.
e. The money received by Smith when she sells her economics textbook to a book buyer.
f. The monthly allowance a college student receives from home.
g. Rent received on a two-bedroom apartment.
h. The money received by Josh when he resells his current-year-model Honda automobile to Kim.
i. Interest received on corporate bonds.
j. A 2-hour decrease in the length of the workweek.
k. The purchase of an AT&T corporate bond.
l. A $2 billion increase in business inventories.
m. The purchase of 100 shares of GM common stock.
n. The purchase of an insurance policy.

Textbook, question 7-13 ANSWERS

(a) Interest on an AT&T bond. **Included**. **-** Income received by the bondholder for the services derived by the corporation for the loan of money.

(b) Social security payments received by a retired factory worker. **Excluded. -** A transfer payment from taxpayers for which no service is rendered (in this year).

(c) The services of a family member in painting the family home. **Excluded**. **-** Not a market transaction. If any payment is made, it will be within the family.

(d) The income of a dentist. **Included. -** Payment for a final service. You cannot pass on a tooth extraction!

(e) The money received by Smith when she sells her economics textbook to a book buyer. **Excluded**. **-** Secondhand sales are not counted; the textbook is counted only when sold for the first time.

(f) The monthly allowance a college student receives from home. **Excluded. -** A private transfer payment; simply a transfer of income from one private individual to another for which no transaction in the market occurs.

(g) Rent received on a two-bedroom apartment. **Included**. - Payment for the final service of housing.

(h) The money received by Josh when he resells his current-year-model Honda automobile to Kim. **Excluded**. - The production of the car had already been counted at the time of the initial sale.

(i) Interest received on corporate bonds. **Included. -** The income received by the bondholders is paid by the corporations for the current use of the “money capital” (the loan).

(j) A 2-hour decrease in the length of the workweek. **Excluded. -** The effect of the decline will be counted, but the change in the workweek itself is not the production of a final good or service or a payment for work done.

(k) The purchase of an AT&T corporate bond. **Excluded. -** A noninvestment transaction; it is merely the transfer of ownership of financial assets. (If AT&T uses the money from the sale of a new bond to carry out an investment in real physical assets that will be counted.)

(l) A $2 billion increase in business inventories. **Included. -** The increase in inventories could only occur as a result of increased production.

(m) The purchase of 100 shares of GM common stock. **Excluded. -** Merely the transfer of ownership of existing financial assets.

(n) The purchase of an insurance policy. **Included.** - Insurance is a final service. If bought by a household, it will be shown as consumption; if bought by a business, as investment—as a cost added to its real investment in physical capital.

GDP is often used as a measure of Economic Well-Being in a country, but there are problems.

For each problem below state whether actual GDP figures UNDERSTATE or OVERSTATE actual economic well-being:

1. GDP doesn't measure some very useful output because it is unpaid (homemakers' services, parental child care, volunteer efforts, home improvement projects). Called non-market transactions

2. GDP doesn't measure improvements in product quality unless they are included in the price.

3. GDP doesn't measure improved living conditions as a result of more leisure.

4. GDP makes no value adjustments for changes in the composition of output. Nominal GDP simply adds the dollar value of what is produced; it makes no difference if the product is a semiautomatic rifle or a jar of baby food.

5. GDP makes no value adjustments for changes in the distribution of income. Per capita GDP may give some hint as to the relative standard of living in the economy; but GDP figures do not provide information about how the income is distributed.

6. GDP does not include output from the Underground Economy. Illegal activities are not counted in GDP (estimated to be around 8% of U.S. GDP). Legal economic activity may also be part of the "underground," usually in an effort to avoid taxation.

7. GDP and the environment: The harmful effects of pollution are not deducted from GDP (oil spills, increased incidence of cancer, destruction of habitat for wildlife, the loss of a clear unobstructed view).

8. Noneconomic Sources of well-being like courtesy, crime reduction, etc., are not covered in GDP.

9. GDP does not account for a possible future decline in output due to resource depletion.

10. Per-capita income should be used to compare the economic well-being of different countries.

Which country has a higher GDP, Switzerland or India? Which has a higher level of economic well-being:

Switzerland:
GDP: $239.3 billion (2003 est.)
Population: 7,450,867 (July 2004 est.)
GDP per capita: $32,700 (2003 est.)

India:
GDP: 1,065,070,607 (July 2004 est.)
Population: $3.033 trillion (2003 est.)
GDP per capita: $2,900 (2003 est.)

Below is a list of domestic output and national income figures for a given year. All figures are in billions. The ensuing questions ask you to determine the major national income measures by both the expenditure and income methods. Answers derived by each approach should be the same.

a. Using the above data, determine GDP and NDP by the expenditure method.
b. Calculate National Income (NI) by the income method.

Personal consumption expenditures	245
Net foreign factor income earned	4
Transfer payments	12
Rents	14
Consumption of fixed capital =depreciation	27
Social security contributions	20
Interest	13
Proprietors' income	33
Net exports	11
Dividends (part of corporate profits)	16
Compensation of employees	223
Indirect business taxes	18
Undistributed corporate profits (part of profits	21
Personal taxes	26
Corporate income taxes (part of corporate profits)	19
Corporate profits	56
Government purchases	72
Net private domestic investment	33
Personal saving	20

ANSWERS:
a. Using the above data, determine GDP and NDP by the expenditure method.

GDP = $388
GDP = C + Igross + G + Xnet
Igross = Inet + depreciation = 33 + 27 = 60
GDP = 245 + 60 + 72 + 11 = 388
NDP = $361
NDP + C + Inet + G + Xnet
NDP = 245 + 33 + 72 + 11 = 361

or

NDP = GDP - depreciation
NDP = 388 - 27 = 361

b. calculate National Income (NI) by the income method.

NI = $339
NI = wages + rents + interest + profits
profits = corporate profits + proprietor's income
profits = 56 + 33 = 89
NI = 223 + 14 + 13 + 89 = 339

Chapter 8 (questions with answers)

1. State two (three) definitions of economic growth.

2. Suppose an economy's real GDP is $50,000 in year 1 and $55,000 in year 2.

    a. What is the growth rate of its GDP?

    b. Assume that population was 100 in year 1 and 105 in year 2. What is the growth rate in GDP per capita?

3. Explain why even small changes in the rate of economic growth are significant. Use the "rule of 70" to demonstrate the point.

4. Which is more important — increasing inputs of resources or increasing the productivity of those inputs — as the main source of economic growth in the United States? Explain.

5. Summarize the historical growth record of the United States over the past 50 years in terms of real GDP growth and in terms of real GDP per capita growth.

ANSWERS:

1. State two (three) definitions of economic growth.

    Economic growth can first be defined and measured as an increase in real GDP occurring over a period of time. This could be caused by an (1) increase in the potential GDP [increase in the ability to produce] or (2) simply achieving the potential GDP [producing more].

    (3) Economic growth can also be defined and measured as an increase in real GDP **per capita** occurring over a period of time. Economic growth is usually calculated as an annual percentage rate of growth.

2. Suppose an economy's real GDP is $50,000 in year 1 and $55,000 in year 2.

a. $5,000/$50,000 or 10% in year 1.
b. The per capita growth can be calculated as follows:
$500 per capita in year 1 ($50,000/100);
$523.81 per capita in year 2 ($55,000/105).

3. Explain why even small changes in the rate of economic growth are significant. Use the "rule of 70" to demonstrate the point.

Small changes in the rate of growth can be very meaningful, especially for a country where a fraction of a percent change in the growth rate may mean the difference between starvation and hunger. Over a period of time small changes are cumulative in the same way that compound interest payments are cumulative on a bank account. Using the rule of 70 to estimate the time it takes to double GDP, we can see that a country whose growth rate is 5% takes 14 years to double its GDP, but a country whose growth rate is 3% may take nearly 10 years longer to double its GDP or about 23.3 years. If these countries continued to grow at their respective 5% and 3% rates, in 28 years the first country's GDP would be quadrupled, whereas in the second country, it would take nearly 47 years to quadruple its GDP from the current year.

4. Which is more important — increasing inputs of resources or increasing the productivity of those inputs — as the main source of economic growth in the United States? Explain.

Both resource quantity and resource productivity contribute significantly to increased economic growth in the United States. About a third of the increase in economic growth comes from increases in resource input and about two-thirds from increases in resource productivity. Clearly, it is not the quantity of resources that is most important but the quality of resources and how they are used for production.

5. Summarize the historical growth record of the United States over the past 50 years in terms of real GDP growth and in terms of real GDP per capita growth.

The real GDP has increased about 3.5% per year between 1950 and 2000. Real GDP per capita rose more slowly because population has grown along with GDP. Still the GDP per capita growth has expanded at about 2.3% per year since 1950.