# Assessing the Economy's Performance

*National income accounting* measures the economy's overall performance. It does for the economy as a whole what private accounting does for the individual firm or for the individual household.

A business firm measures its flows of income and expenditures regularly—usually every 3 months or once a year. With that information in hand, the firm can gauge its economic health. If things are going well and profits are good, the accounting data can be used to explain that success. Were costs down? Was output up? Have market prices risen? If things are going badly and profits are poor, the firm may be able to identify the reason by studying the record over several accounting periods. All this information helps the firm's managers plot their future strategy.

**National income accounting** operates in much the same way for the economy as a whole. The Bureau of Economic Analysis (BEA, an agency of the Commerce Department) compiles the National Income and Product Accounts (NIPA) for the U.S. economy. This accounting enables economists and policymakers to:

- Assess the health of the economy by comparing levels of production at regular intervals.
- Track the long-run course of the economy to see whether it has grown, been constant, or declined.
- Formulate policies that will safeguard and improve the economy's health.

# Gross Domestic Product

The primary measure of the economy's performance is its annual total output of goods and services or, as it is called, its *aggregate output*. There are several ways to measure aggregate output depending upon how one wishes to define "an economy." For instance, should the value of the cars produced at a Toyota plant in Ohio count as part of the output of the U.S. economy because they are made within the United States or as part of the Japanese economy because Toyota is a Japanese company? As mentioned in Chapter 23, **gross domestic product (GDP)** defines aggregate output as the dollar value of all final goods and services produced within the borders of a given country during a given period of time, typically a year. Under this definition, the value of the cars produced at the Toyota factory in Ohio clearly count as part of U.S. aggregate output rather than Japanese aggregate output because the cars are made within the borders of the United States.

TABLE 24.1 **Comparing Heterogeneous Output by Using Money Prices**

| Year | Annual Output | Market Value |
|---|---|---|
| 1 | 3 sofas and 2 computers | 3 at \$500 + 2 at \$2000 = \$5500 |
| 2 | 2 sofas and 3 computers | 2 at \$500 + 3 at \$2000 = \$7000 |

## A Monetary Measure

If the economy produces three sofas and two computers in year 1 and two sofas and three computers in year 2, in which year is output greater? We can't answer that question until we attach a price tag to each of the two products to indicate how society evaluates their relative worth.

That's what GDP does. It is a *monetary measure*. Without such a measure we would have no way of comparing the relative values of the vast number of goods and services produced in different years. In Table 24.1 the price of sofas is \$500 and the price of computers is \$2000. GDP would gauge the output of year 2 (\$7000) as greater than the output of year 1 (\$5500) because society places a higher monetary value on the output of year 2. Society is willing to pay \$1500 more for the combination of goods produced in year 2 than for the combination of goods produced in year 1.

## Avoiding Multiple Counting

To measure aggregate output accurately, all goods and services produced in a particular year must be counted once and only once. Because most products go through a series of production stages before they reach the market, some of their components are bought and sold many times. To avoid counting those components each time, GDP includes only the market value of *final goods* and ignores *intermediate goods* altogether.

**Intermediate goods** are goods and services that are purchased for resale or for further processing or manufacturing. **Final goods** are consumption goods, capital goods, and services that are purchased by their final users, rather than for resale or for further processing or manufacturing.

Why is the value of final goods included in GDP but the value of intermediate goods excluded? Because the value of final goods already includes the value of all the intermediate goods that were used in producing them. Including the value of intermediate goods would amount to **multiple counting,** and that would distort the value of GDP.

To see why, suppose that five stages are needed to manufacture a wool suit and get it to the consumer—the final user. Table 24.2 shows that firm A, a sheep ranch, sells \$120 worth of wool to firm B, a wool processor. Firm A pays out the \$120 in wages, rent, interest, and profit. Firm B processes the wool and sells it to firm C, a suit manufacturer,

TABLE 24.2 **Value Added in a Five-Stage Production Process**

| (1) Stage of Production | (2) Sales Value of Materials or Product | (3) Value Added |
|---|---|---|
| | $ 0 | $120 (= $120 − $ 0) |
| Firm A, sheep ranch | 120 | 60 (= 180 − 120) |
| Firm B, wool processor | 180 | 40 (= 220 − 180) |
| Firm C, suit manufacturer | 220 | 50 (= 270 − 220) |
| Firm D, clothing wholesaler | 270 | 80 (= 350 − 270) |
| Firm E, retail clothier | **350** | |
| Total sales values | $1140 | |
| Value added (total income) | | **$350** |

for $180. What does firm B do with the $180 it receives? It pays $120 to firm A for the wool and uses the remaining $60 to pay wages, rent, interest, and profit for the resources used in processing the wool. Firm C, the manufacturer, sells the suit to firm D, a wholesaler, which sells it to firm E, a retailer. Then at last a consumer, the final user, comes in and buys the suit for $350.

How much of these amounts should we include in GDP to account for the production of the suit? Just $350, the value of the final product. The $350 includes all the intermediate transactions leading up to the product's final sale. Including the sum of all the intermediate sales, $1140, in GDP would amount to multiple counting. The production and sale of the final suit generated just $350 of output, not $1140.

Alternatively, we could avoid multiple counting by measuring and cumulating only the *value added* at each stage. **Value added** is the market value of a firm's output *less* the value of the inputs the firm has bought from others. At each stage, the difference between what a firm pays for inputs and what it receives from selling the product made from those inputs is paid out as wages, rent, interest, and profit. Column 3 of Table 24.2 shows that the value added by firm B is $60, the difference between the $180 value of its output and the $120 it paid for the input from firm A. We find the total value of the suit by adding together all the values added by the five firms. Similarly, by calculating and summing the values added to all the goods and services produced by all firms in the economy, we can find the market value of the economy's total output—its GDP.

## GDP Excludes Nonproduction Transactions

Although many monetary transactions in the economy involve final goods and services, many others do not. These nonproduction transactions must be excluded from GDP because they have nothing to do with the generation of final goods. *Nonproduction transactions* are of two types: purely financial transactions and secondhand sales.

**Financial Transactions** Purely financial transactions include the following:

- ***Public transfer payments*** These are the social security payments, welfare payments, and veterans' payments that the government makes directly to households. Since the recipients contribute nothing to *current production* in return, to include such payments in GDP would be to overstate the year's output.
- ***Private transfer payments*** Such payments include, for example, the money that parents give children or the cash gifts given at Christmas time. They produce no output. They simply transfer funds from one private individual to another and consequently do not enter into GDP.
- ***Stock market transactions*** The buying and selling of stocks (and bonds) is just a matter of swapping bits of paper. Stock market transactions create nothing in the way of current production and are not included in GDP. Payments for the services provided by a stockbroker *are* included, however, because their services are currently provided and are thus a part of the economy's current output of goods and services.

**Secondhand Sales** Secondhand sales contribute nothing to current production and for that reason are excluded from GDP. Suppose you sell your 1965 Ford Mustang to a friend; that transaction would be ignored in reckoning this year's GDP because it generates no current production. The same would be true if you sold a brand-new Mustang to a neighbor a week after you purchased it. **(Key Question 3)**

## Two Ways of Looking at GDP: Spending and Income

Let's look again at how the market value of total output—or of any single unit of total output—is measured. Given the data listed in Table 24.2, how can we measure the market value of a suit?

One way is to see how much the final user paid for it. That will tell us the market value of the final product. Or we can add up the entire wage, rental, interest, and profit incomes that were created in producing the suit. The second approach is the value-added technique used in Table 24.2.

The final-product approach and the value-added approach are two ways of looking at the same thing. What is spent on making a product is income to those who helped make it. If $350 is spent on manufacturing a suit, then $350 is the total income derived from its production.

We can look at GDP in the same two ways. We can view GDP as the sum of all the money spent in buying it. That is the *output approach*, or **expenditures approach.** Or we can view GDP in terms of the income derived or created from producing it. That is the *earnings* or *allocations approach*, or the **income approach.**

As illustrated in Figure 24.1, we can determine GDP for a particular year either by adding up all that was spent to buy total output or by adding up all the money that was derived as income from its production. Buying (spending money) and selling (receiving income) are two aspects of the same transaction. On the expenditures side of GDP, all final goods produced by the economy are bought either by three domestic sectors (households, businesses, and government) or by foreign buyers. On the income side (once certain statistical adjustments are made), the total receipts acquired from the sale of that total output are allocated to the suppliers of resources as wage, rent, interest, and profit.

# The Expenditures Approach

To determine GDP using the expenditures approach, we add up all the spending on final goods and services that has taken place throughout the year. National income accountants use precise terms for the types of spending listed on the left side of Figure 24.1.

## Personal Consumption Expenditures ($C$)

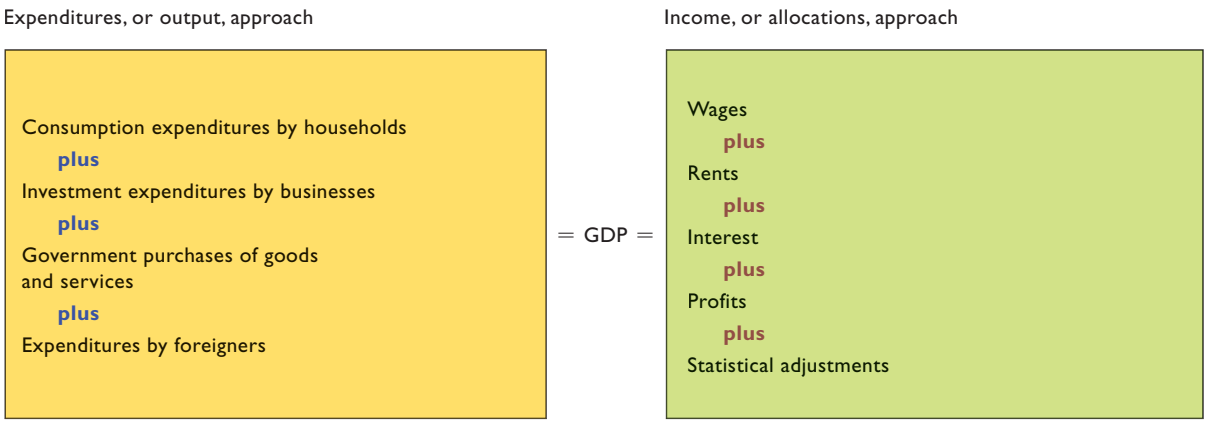
What we have called "consumption expenditures by households," the national income accountants call **personal consumption expenditures.** That term covers all expenditures by households on *durable consumer goods* (automobiles, refrigerators, video recorders), *nondurable consumer goods* (bread, milk, vitamins, pencils, toothpaste), and *consumer expenditures for services* (of lawyers, doctors, mechanics, barbers). The accountants use the symbol $C$ to designate this component of GDP.

## Gross Private Domestic Investment ($I_g$)

Under the heading **gross private domestic investment,** the accountants include the following items:

- All final purchases of machinery, equipment, and tools by business enterprises.
- All construction.
- Changes in inventories.

**FIGURE 24.1 The expenditures and income approaches to GDP.** There are two general approaches to measuring gross domestic product. We can determine GDP as the value of output by summing all expenditures on that output. Alternatively, with some modifications, we can determine GDP by adding up all the components of income arising from the production of that output.



Notice that this list, except for the first item, includes more than we have meant by "investment" so far. The second item includes residential construction as well as the construction of new factories, warehouses, and stores. Why do the accountants regard residential construction as investment rather than consumption? Because apartment buildings and houses, like factories and stores, earn income when they are rented or leased. Owner-occupied houses are treated as investment goods because they *could be* rented to bring in an income return. So the national income accountants treat all residential construction as investment. Finally, increases in inventories (unsold goods) are considered to be investment because they represent, in effect, "unconsumed output." For economists, all new output that is not consumed is, by definition, capital. An increase in inventories is an addition (although perhaps temporary) to the stock of capital goods, and such additions are precisely how we define investment.

### Positive and Negative Changes in Inventories

We need to look at changes in inventories more closely. Inventories can either increase or decrease over some period. Suppose they increased by $10 billion between December 31, 2006, and December 31, 2007. That means the economy produced $10 billion more output than was purchased in 2007. We need to count all output produced in 2007 as part of that year's GDP, even though some of it remained unsold at the end of the year. This is accomplished by including the $10 billion increase in inventories as investment in 2007. That way the expenditures in 2007 will correctly measure the output produced that year.

Alternatively, suppose that inventories decreased by $10 billion in 2007. This "drawing down of inventories" means that the economy sold $10 billion more of output in 2007 than it produced that year. It did this by selling goods produced in prior years—goods already counted as GDP in those years. Unless corrected, expenditures in 2007 will overstate GDP for 2007. So in 2007 we consider the $10 billion decline in inventories as "negative investment" and subtract it from total investment that year. Thus, expenditures in 2007 will correctly measure the output produced in 2007.

### Noninvestment Transactions

So much for what investment *is*. You also need to know what it *isn't*. Investment does *not* include the transfer of paper assets (stocks, bonds) or the resale of tangible assets (houses, jewelry, boats). Such transactions merely transfer the ownership of existing assets. Investment has to do with the creation of *new* capital assets. The mere transfer (sale) of claims to existing capital goods does not create new capital.

### Gross Investment versus Net Investment

As we have seen, the category gross private domestic investment includes (1) all final purchases of machinery, equipment, and tools; (2) all construction; and (3) changes in inventories. The words "private" and "domestic" mean that we are speaking of spending by private businesses, not by government (public) agencies, and that the investment is taking place inside the country, not abroad.

The word "gross" means that we are referring to *all* investment goods—both those that replace machinery, equipment, and buildings that were used up (worn out or made obsolete) in producing the current year's output and any net additions to the economy's stock of capital. Gross investment includes investment in replacement capital *and* in added capital.

In contrast, **net private domestic investment** includes *only* investment in the form of added capital. The amount of capital that is used up over the course of a year is called *depreciation*. So

Net investment = gross investment − depreciation

In typical years, gross investment exceeds depreciation. Thus net investment is positive and the nation's stock of capital rises by the amount of net investment. As illustrated in Figure 24.2, the stock of capital at the end of the year exceeds the stock of capital at the beginning of the year by the amount of net investment.

Gross investment need not always exceed depreciation, however. When gross investment and depreciation *are equal*, net investment is zero and there is no change in the size of the capital stock. When gross investment *is less than* depreciation, net investment is negative. The economy then is *disinvesting*—using up more capital than it is producing—and the nation's stock of capital shrinks. That happened in the Great Depression of the 1930s.

National income accountants use the symbol $I$ for private domestic investment spending. To differentiate between gross investment and net investment, they add either the subscript $g$ or the subscript $n$. But it is gross investment, $I_g$, that they use when tallying up GDP.

## Government Purchases ($G$)

The third category of expenditures in the national income accounts is **government purchases,** officially labeled "government consumption expenditures and gross investment." These expenditures have two components: (1) expenditures for goods and services that government consumes in providing public services and (2) expenditures for *publicly owned capital* such as schools and highways, which have long lifetimes. Government purchases

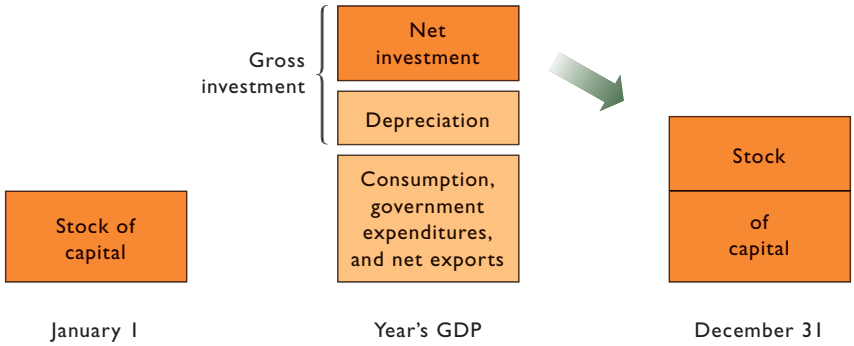



**FIGURE 24.2 Gross investment, depreciation, net investment, and the stock of capital.** When gross investment exceeds depreciation during a year, net investment occurs. This net investment expands the stock of private capital from the beginning of the year to the end of the year by the amount of the net investment. Other things equal, the economy's production capacity expands.

(Federal, state, and local) include all government expenditures on final goods and all direct purchases of resources, including labor. It does *not* include government transfer payments because, as we have seen, they merely transfer government receipts to certain households and generate no production of any sort. National income accountants use the symbol $G$ to signify government purchases.

## CONSIDER THIS . . .

### Stock Answers about Flows

An analogy of a reservoir is helpful in thinking about a nation's capital stock, investment, and depreciation. Picture a reservoir that has water flowing in from a river and flowing out from an outlet after it passes through turbines. The volume of water in the reservoir *at any particular point in time* is a "stock." In contrast, the inflow from the river and outflow from the outlet are "flows."

The volume or stock of water in the reservoir will rise if the weekly inflow exceeds the weekly outflow. It will fall if the inflow is less than the outflow. And it will remain constant if the two flows are equal.

Now let's apply this analogy to the stock of capital, gross investment, and depreciation. The stock of capital is the total capital in place at any point in time and is analogous to the level of water in the reservoir. Changes in this capital stock over some period, for example, 1 year, depend on *gross investment* and *depreciation*. Gross investment (analogous to the reservoir inflow) is an addition of capital goods and therefore adds to the stock of capital, while depreciation (analogous to the reservoir outflow) is the using up of capital and thus subtracts from the capital stock. The capital stock increases when gross investment exceeds depreciation, declines when gross investment is less than depreciation, and remains the same when gross investment and depreciation are equal.

Alternatively, the stock of capital increases when *net investment* (gross investment *minus* depreciation) is positive. When net investment is negative, the stock of capital declines, and when net investment is zero, the stock of capital remains constant.

## Net Exports ($X_n$)

International trade transactions are a significant item in national income accounting. But when calculating U.S. GDP, we must keep in mind that we want to total up only those expenditures that are used to purchase goods and services produced *within the borders of the United States*. Thus, we must add in the value of exports, $X$, since exports are by definition goods and services produced within the borders of the United States. Don't be confused by the fact that the expenditures made to buy up our exports are made by foreigners. The definition of GDP does not care about *who* is making expenditures on U.S.-made goods and services—only that the goods and services that they buy are made within the borders of the United States. Thus, foreign spending on our exports *must* be included in GDP.

At this point, you might incorrectly think that GDP should be equal to the sum of $C + I_g + G + X$. But this sum overstates GDP. The problem is that, once again, we must consider only expenditures made on *domestically produced* goods and services. As it stands, $C$, $I_g$, and $G$ count up expenditures on consumption, investment, and government purchases *regardless* of where those goods and services are made. Crucially, not all of the $C$, $I_g$, or $G$ expenditures are for domestically produced goods and services. Some of the expenditures are for imports—goods and services produced outside of the United States. Thus, since we wish to count *only* the part of $C$, $I_g$, and $G$ that goes to purchasing domestically produced goods and services, we must subtract off the spending that goes to imports, $M$. Doing so yields the correct formula for calculating gross domestic product: GDP $= C + I_g + G + X - M$.

**TABLE 24.3 Accounting Statement for the U.S. Economy, 2007 (in Billions)**

| Receipts: Expenditures Approach | | Allocations: Income Approach* | |
|---|---|---|---|
| Sum of: | | Sum of: | |
| Personal consumption expenditures ($C$) | $9734 | Compensation of employees | $7874 |
| Gross private domestic investment ($I_g$) | 2125 | Rents | 65 |
| Government purchases ($G$) | 2690 | Interest | 603 |
| Net exports ($X_n$) | −708 | Proprietors' income | 1043 |
| | | Corporate profits | 1627 |
| | | Taxes on production and imports | 1009 |
| | | *Equals:* | |
| | | ***National income*** | ***$12,221*** |
| | | National income | $12,221 |
| | | *Less:* Net foreign factor income | 96 |
| | | *Plus:* Statistical discrepancy | 29 |
| | | *Plus:* Consumption of fixed capital | 1687 |
| *Equals:* | | *Equals:* | |
| ***Gross domestic product*** | ***$13,841*** | ***Gross domestic product*** | ***$13,841*** |

*Some of the items in this column combine related categories that appear in the more detailed accounts.

*Source:* Bureau of Economic Analysis, **www.bea.gov**.

Accountants simplify this formula for GDP by defining **net exports,** $X_n$, to be equal to exports minus imports:

$$\text{Net exports } (X_n) = \text{exports } (X) - \text{imports } (M).$$

Using this definition of net exports, the formula for gross domestic product simplifies to,

$$\text{GDP} = C + I_g + G + X_n.$$

Table 24.3 shows that in 2007 Americans spent $708 billion more on imports than foreigners spent on U.S. exports. That is, net exports in 2007 were a *minus* $708 billion.

## Putting It All Together: GDP = $C + I_g + G + X_n$

Taken together, the four categories of expenditures provide a measure of the market value of a given year's total output—its GDP. For the United States in 2007 (Table 24.3),

$$\text{GDP} = \$9734 + 2125 + 2690 - 708 = \$13{,}841 \text{ billion}$$

Global Perspective 24.1 lists the GDPs of several countries. The values of GDP are converted to dollars using international exchange rates.

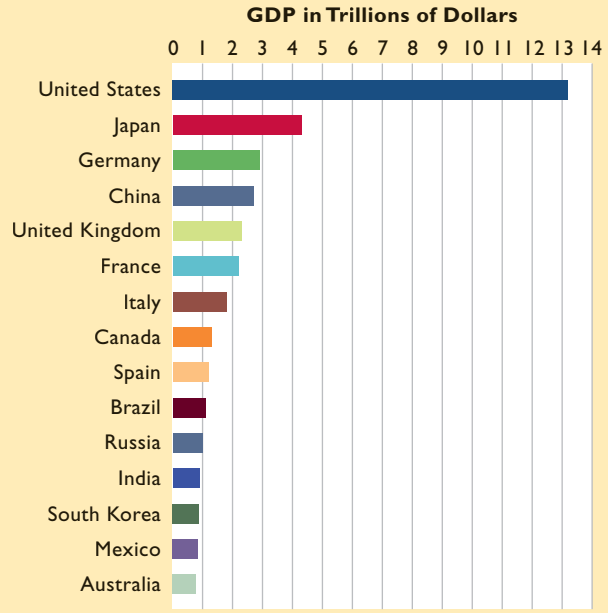
## The Income Approach

Table 24.3 shows how 2007's expenditures of $13,841 billion were allocated as income to those responsible for producing the output. It would be simple if we could say that the entire amount of expenditures flowed back to them

### GLOBAL PERSPECTIVE 24.1

**Comparative GDPs in Trillions of Dollars, Selected Nations, 2007**

The United States, Japan, and Germany have the world's highest GDPs. The GDP data charted below have been converted to U.S. dollars via international exchange rates.




*Source:* World Bank, **www.worldbank.org.**

in the form of wages, rent, interest, and profit. But some expenditures flow to other recipients (such as the government) or to other uses (such as paying to replace the capital goods that have worn out while producing this year's GDP). These must be accounted for in order to balance the expenditures and income sides of the account. We will begin by looking at the items that make up *national income*.

## Compensation of Employees

By far the largest share of national income—$7874 billion—was paid as wages and salaries by business and government to their employees. That figure also includes wage and salary supplements, in particular, payments by employers into social insurance and into a variety of private pension, health, and welfare funds for workers.

## Rents

Rents consist of the income received by the households and businesses that supply property resources. They include the monthly payments tenants make to landlords and the lease payments corporations pay for the use of office space. The figure used in the national accounts is *net* rent—gross rental income minus depreciation of the rental property.

## Interest

Interest consists of the money paid by private businesses to the suppliers of loans used to purchase capital. It also includes such items as the interest households receive on savings deposits, certificates of deposit (CDs), and corporate bonds.

## Proprietors' Income

What we have loosely termed "profits" is broken down by the national income accountants into two accounts: proprietors' income, which consists of the net income of sole proprietorships, partnerships, and other unincorporated businesses; and corporate profits. Proprietors' income flows to the proprietors.

## Corporate Profits

Corporate profits are the earnings of corporations. National income accountants subdivide corporate profits into three categories:

- ***Corporate income taxes*** These taxes are levied on corporations' profits. They flow to the government.
- ***Dividends*** These are the part of after-tax profits that corporations choose to pay out, or distribute, to their stockholders. They thus flow to households—the ultimate owners of all corporations.
- ***Undistributed corporate profits*** Any after-tax profits that are not distributed to shareholders are saved, or retained, by corporations to be invested later in new plants and equipment. Undistributed corporate profits are also called *retained earnings*.

## Taxes on Production and Imports

The account called **taxes on production and imports** includes general sales taxes, excise taxes, business property taxes, license fees, and customs duties. Why do national income accountants add these indirect business taxes to wages, rent, interest, and profits in determining national income? The answer is, "to account for expenditures that are diverted to the government." Consider an item that would otherwise sell for $1 but costs $1.05 because the government has imposed a 5 percent sales tax. When this item is purchased, consumers will expend $1.05 to buy it. But only $1 will go to the seller (who will then distribute it as income in the form of wages, rent, interest, and profit in order to compensate resource providers). The remaining 5 cents will flow as revenue to the government. The GDP accountants handle the extra 5 cents by placing it into the category called "Taxes on Production and Imports" and loosely consider it to be "income" to government.

## From National Income to GDP

We have just shown that expenditures on final goods and services flow either as income to private citizens or as "income" to government. As a result, **national income** is the total of all sources of private income (employee compensation, rents, interest, proprietors' income, and corporate profits) plus government revenue from taxes on production and imports. National income is all the income that flows to American-supplied resources, whether here or abroad, plus taxes on production and imports. But notice that the figure for national income shown in Table 24.3—$12,221 billion—is less than GDP as reckoned by the expenditures approach shown on the left side of the table. The two sides of the accounting statement are brought into balance by adding three items to national income.

### Net Foreign Factor Income

First, we need to make a slight adjustment in "national" income versus "domestic" income. National income includes the total income of Americans, whether it was earned in the United States or abroad. But GDP is a measure of *domestic* output—total output produced within the United States regardless of the nationality of those who provide the resources. So in moving from national income to GDP, we must consider the income Americans gain from supplying resources abroad and the income that foreigners gain by supplying

resources in the United States. In 2007, American-owned resources earned $96 billion more abroad than foreign-owned resources earned in the United States. That difference is called *net foreign factor income*. Because it is earnings of Americans, it is included in U.S. national income. But this income is not part of domestic income because it reflects earnings from output produced in some other nation. Thus, we subtract net foreign factor income from U.S. national income to stay on the correct path to use the income approach to determine the value of U.S. *domestic* output (output produced within the U.S. borders).

**Statistical Discrepancy** NIPA accountants add a statistical discrepancy to national income to make the income approach match the outcome of the expenditures approach. In 2007 that discrepancy was $29 billion.

**Consumption of Fixed Capital** Finally, we must recognize that the useful lives of private capital equipment (such as bakery ovens or automobile assembly lines) extend far beyond the year in which they were produced. To avoid understating profit and income in the year of purchase and to avoid overstating profit and income in succeeding years, the cost of such capital must be allocated over its lifetime. The amount allocated is an estimate of how much of the capital is being used up each year. It is called *depreciation*. Accounting for depreciation results in a more accurate statement of profit and income for the economy each year. Publicly owned capital, such as courthouses and bridges, also requires a depreciation allowance in the national income accounts.

The huge depreciation charge made against private and publicly owned capital each year is called **consumption of fixed capital** because it is the allowance for capital that has been "consumed" in producing the year's GDP. It is the portion of GDP that is set aside to pay for the ultimate replacement of those capital goods.

The money allocated to consumption of fixed capital (the depreciation allowance) is a cost of production and thus included in the gross value of output. But this money is not available for other purposes, and, unlike other costs of production, it does not add to anyone's income. So it is not included in national income. We must therefore add it to national income to achieve balance with the economy's expenditures, as in Table 24.3.

Table 24.3 summarizes the expenditures approach and income approach to GDP. The left side shows what the U.S. economy produced in 2007 and what was spent to purchase it. The right side shows how those expenditures were allocated either as income to individuals, as revenue to the government, or to other uses such as paying for the replacement of depreciated capital.

### QUICK REVIEW 24.1

- Gross domestic product (GDP) is a measure of the total market value of all final goods and services produced by the economy in a given year.
- The expenditures approach to GDP sums the total spending on final goods and services: GDP = $C + I_g + G + X_n$.
- The economy's stock of private capital expands when net investment is positive; stays constant when net investment is zero; and declines when net investment is negative.
- The income approach to GDP sums compensation to employees, rent, interest, proprietors' income, corporate profits, and taxes on production and imports to obtain national income, and then subtracts net foreign factor income and adds a statistical discrepancy and consumption of fixed capital to obtain GDP.

## Other National Accounts

Several other national accounts provide additional useful information about the economy's performance. We can derive these accounts by making various adjustments to GDP.

### Net Domestic Product

As a measure of total output, GDP does not make allowances for replacing the capital goods used up in each year's production. As a result, it does not tell us how much new output was available for consumption and for additions to the stock of capital. To determine that, we must subtract from GDP the capital that was consumed in producing the GDP and that had to be replaced. That is, we need to subtract consumption of fixed capital (depreciation) from GDP. The result is a measure of **net domestic product (NDP):**

NDP = GDP − consumption of fixed capital (depreciation)

For the United States in 2007:

| | Billions |
|---|---|
| Gross domestic product | $13,841 |
| *Less:* Consumption of fixed capital | 1687 |
| *Equals:* Net domestic product | $12,154 |

NDP is simply GDP adjusted for depreciation. It measures the total annual output that the entire economy—households, businesses, government, and foreigners—can consume without impairing its capacity to produce in ensuing years.

### National Income

Sometimes it is useful to know how much Americans earned for their contributions of land, labor, capital, and