

CHAPTER 21

WHY DO WE NEGLECT LEISURE
AND CHEER FOR DIVORCE?The Divergence of Gross Domestic Product
and Measures of Well-Being

Gross domestic product (GDP) is the market value of all final goods and services produced in a country within a given period. Policymakers target GDP growth as if it embodied everything that is good, but as a measure of well-being, GDP represents a mixed bag at best. GDP figures can mislead because some goods and services are purchased in response to problems, such as pollution and terrorism, and many of the true joys of life, such as time spent with friends and family, are left out of GDP. Consider a typical worker, a blissful retiree, and an unemployed worker who got divorced and had heart bypass surgery in the same year. The typical worker contributes about \$85,000 worth of output to GDP each year. The litigation costs for a “lightly conflicted” divorce run about \$45,000, as do the health-care costs for heart bypass surgery.¹ Although the retiree may be the happiest member of this bunch, she added nothing to GDP, whereas the victim of bad luck is responsible for the largest contribution. A country beset with bad luck—wars, hurricanes, disease, crime—runs up a large GDP, too. This chapter explains the methods of calculating gross domestic product, the weakness of GDP as a measure of contentment, and alternative measures that give more accurate indications of both burdens and bliss.

¹ See, for example, www.raisinghappykids.com/Mediation.html and www.gsdl.com/home/assessments/cardio/appguide/.

MEASURING GDP

GDP may not be the root of happiness, but it is a valuable measure of output, with implications for employment and economic growth. In 1991, GDP replaced gross national product (GNP) as the primary measure of production used by U.S. economists. The difference is that GDP measures the value of goods and services produced by anyone on U.S. soil, whereas GNP measures the value of production by U.S. citizens anywhere in the world. Thus, Venus Williams's winnings at Wimbledon are part of U.S. GNP because she is a U.S. citizen and part of British GDP because she earned them on British soil. Government agencies and private corporations use GDP figures widely to get a read on the direction of the economy. For example, the Central Intelligence Agency (CIA) uses GDP per capita (GDP divided by the number of citizens) as a benchmark for the standard of living in nations around the world,² and the board of governors of the Federal Reserve System and the president's Council of Economic Advisers use GDP as a gauge of the economy's performance and a basis for policy decisions.

GDP is calculated by the Bureau of Economic Analysis (BEA), an agency of the U.S. Department of Commerce. There are three primary ways of compiling the GDP figure:

First, the *expenditure approach* adds up the following to obtain the total expenditure on goods and services:³

- consumption spending by households
- investment spending by businesses
- government spending
- net exports (exports minus imports)

In order to avoid double counting, only spending on "final" goods and services is included. This means that expenditures on raw materials (such as iron ore) and on intermediate goods (such as car engines) are not counted until such inputs become part of a completed product (such as a car), and spending on goods purchased for resale isn't counted until the goods are sold to the ultimate consumer. The investment component of GDP includes business spending on machinery and other capital goods, new construction of both businesses and homes, and goods that are produced and held as net additions to inventories. The purchase of stocks and bonds and the deposit of money into banks do not represent production and are not counted as investment. By adding up all these expenditures, the BEA can determine the value of final goods and services produced within a particular year.

Second, the *value-added approach*, similar to the expenditure approach, examines output values, but the method of avoiding double counting is different. Rather than considering only final goods and services, the value-added approach examines raw and intermediate goods and services as well, and it counts only the incremental change in value from one step in the production process to the next. If \$1 worth of cotton becomes \$5 worth of fabric, which becomes a \$30 dress, the value-added approach

² For a ranking of nations according to GDP per capita, see <http://www.cia.gov/cia/publications/factbook/rankorder/2004rank.html>.

³ More formally, denoting consumption as C , investment as I , government spending as G , exports as X , and imports as M , this is written as $GDP = C + I + G + (X - M)$.

is to add together the \$1 value of the cotton, the \$4 increase in value when the cotton becomes fabric, and the \$25 increase in value when the fabric becomes a dress to get the same \$30 figure that the expenditure approach takes from the final sale of the dress: $\$30 = \$1 + (\$5 - \$1) + (\$30 - \$5)$.

Third, the *income approach* is based on the logic that workers receive the market value of goods and services as income. *National income* is the sum of the following:

- employee compensation
- interest payments, as on bank deposits and bonds
- rental income received by landlords
- corporate profits
- proprietors' (that is, businesses owners') income

To find GDP, national income must be adjusted by adding items that are part of the value of production but not part of income and by removing items that count toward income but not toward production.⁴ Specifically, this entails doing the following:

1. subtracting government subsidies, which are part of income but don't count toward production
2. adding the value of new capital purchased to replace old capital, called *capital consumption*, or *depreciation*, because those purchases are made with current income
3. adding *net foreign factor income*, which is the difference between what U.S. investors earn on assets in the United States and what U.S. investors earn on assets elsewhere

In theory, all three of these approaches lead to the same estimate of GDP. In practice, they are similar. After the first quarter of 2006, the BEA estimated GDP at \$13.037 trillion and national income to be \$11.492 trillion.⁵ After making the adjustments as previously explained to estimate GDP using national income, the difference between the two GDP estimates was a "statistical discrepancy" of \$33.3 billion, about one-quarter of 1 percent. As they say, that's not bad for government work.

OUT WITH THE BADS AND IN WITH THE GOODS

Empirical economic research has established that nations that trade more enjoy higher rates of economic growth and hence higher living standards, measured per capita gross domestic product.

—Pete du Pont, *National Center for Policy Analysis*

⁴ It used to be that *indirect business taxes*, such as excise taxes, sales taxes, and property taxes, were the items added to national income to find GDP. However, the 2003 Comprehensive Revision of the Income and Product Accounts (see page 15 of www.bea.gov/bea/ARTICLES/2003/06June/06031.pdf) redefines national income to include indirect business taxes among other "nonfactor charges."

⁵ See Table 1.7.5 at www.bea.gov/bea/dn/dpqa.txt.

⁶ See <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=2835>.

Our third-quarter economic growth was vibrant, and that's good.

—President George W. Bush⁷

Policymakers and the media often herald GDP growth as a uniformly splendid event. In fact, increases in GDP may or may not be desirable. GDP increases when money is spent to deal with social failures, such as excessive pollution and crime; when burdens are placed on future generations by the use of farming techniques that cause soil erosion and by manufacturing that depletes nonrenewable resources; and when activities shift from nonmarket to market sectors, as when nannies substitute for unpaid family members, televisions substitute for interpersonal contact, and KFC takes the place of home-cooked meals. A better measure of progress would exclude expenditures that signal bad situations and include the value of beneficial nonmarket activities. This section identifies the categories of expenditure that should and should not be parts of an accurate indicator of social welfare.

The Bads

Defensive goods and services are those necessitated by problems that make society worse off, as with corruption; natural disasters; disease; and such perils of economic growth as pollution, congestion, and work-related stress. For example, in a typical year \$478.6 billion of the U.S. GDP is spent on police, prisons, security systems, and other purchases to help deal with the problem of crime.⁸ If the crime rate worsens, this component of GDP will increase, but society will be worse off. As another example, \$100 billion is spent each year to treat chronic back pain, which is often caused by injury, depression, or the stress and strain of fast-paced jobs.⁹ Between 1996 and 2001, use of the most expensive back treatment, spinal-fusion surgery, increased 77 percent at \$34,000 a pop.¹⁰ Back pain has become a leading reason to visit a doctor, but increased expenditures on this or any other burgeoning malady do not reflect a better life. Ditto for expenditures on counterterrorism, drug treatment, oil spills, malignancies, psychologists, funerals, and so on. Increased expenditures on defensive goods and services indicate that the quality of life has diminished, and these expenditures should be subtracted from GDP to obtain a more accurate measure of social welfare.

As step 2 of the adjustment from national income to GDP in the previous section indicates, capital consumption (depreciation) is part of GDP. This erosion in the value of capital during the production process is not an indication of better living. Suppose that \$5,000 worth of silk-screening equipment must be replaced because of wear and tear after the production of \$100,000 worth of Hard Rock Café t-shirts. GDP would increase by \$105,000 because it includes capital consumption, whereas the net gain for society would be \$100,000 worth of new products because \$5,000 worth of new capital would be required to replace the worn-out machinery. The U.S. government publishes net national product (NNP) figures that adjust GDP to account for the de-

preciation of traditional (human-made) capital. NNP does not adjust for losses of forests, oil reserves, and other natural capital associated with increases in GDP. A true measure of social welfare would reflect the losses of all types of capital.

The Goods

Nonmarket production provides benefits to society in the absence of explicit prices and purchases. Work performed for the benefit of the worker and the worker's family—child care, gardening, housework, do-it-yourself home improvements—is not included in GDP, although the same duties *are* counted in GDP when performed by a paid professional. Production in the *underground economy*, also known as the *cash economy*, that is not reported to the government also is not part of GDP, despite available estimates that its value approaches \$1 trillion per year in the United States.¹¹ And the volunteer work performed at churches, charities, nursing homes, schools, and elsewhere goes uncounted in GDP. For those with the option to work more for pay, the fact that they spend more time on these nonmarket activities indicates that they perceive larger marginal benefits from volunteering than they would receive from additional market work. It is important to include these goods and services, to the extent possible, in a true measure of social welfare.

Improvements in GDP and national income don't necessarily correspond with improvements in income distribution or guarantee that most people are earning higher incomes. It may be that a small percentage of people are earning more, whereas most incomes are stagnating or even declining. If a gauge of income distribution is desired within a measure of social welfare, the *Gini coefficient* could serve that purpose. The Gini coefficient ranges from 0 to 1, increasing with the gap between perfect equality and complete inequality in income distribution. A coefficient of 0 means that everyone receives the same income, and a coefficient of 1 means that the richest person receives all the income. In 2004, the Gini coefficient was 0.33 in Canada, 0.41 in the United States, and 0.55 in Mexico.

Finally, as elated as people might be about weekends, days off, and the prospect of early retirement, the quality and quantity of leisure time don't find their way into GDP calculations. GDP would be higher if everyone worked incessantly, but then people would have no time in which to enjoy the bumper crop of output. An ideal measure of social welfare would reflect the opportunities for leisure time.

ALTERNATIVE MEASURES

Economists have proposed several indicators of welfare and progress as alternatives to GDP. Examples include the following:

- the Measure of Economic Welfare (MEW)
- Net National Welfare (NNW)
- the Index of Leading Cultural Indicators (ILCI)

⁷ See <http://transcripts.cnn.com/TRANSCRIPTS/031103/sc.02.html>.

⁸ David A. Anderson, "The Aggregate Burden of Crime," *Journal of Law and Economics* (1999), 42:2, 611–642.

⁹ See, for example, www.back-pain-management.com/.

¹⁰ See www.msnbc.msn.com/id/4767268/.

¹¹ See www.ncpa.org/ba/ba273.html.

- the Index of Social Health (ISH)
- Economic Aspects of Welfare (EAW)
- the Green GDP
- the Genuine Progress Indicator (GPI)
- the Index of Sustainable Economic Welfare (ISEW)

Most of these measures adjust GDP by adding categories that promote social welfare and subtracting categories that don't, as described previously. Some of the measures start from scratch. For instance, the ISEW is calculated as follows:

$$\begin{aligned} \text{ISEW} = & \text{personal consumption} / \text{distribution inequality}^{12} \\ & + \text{household labor} + \text{value of services from consumer durables} \\ & + \text{streets and highways} + \text{public expenditures on health and education} \\ & - \text{consumer durables} - \text{defensive private expenditures on health and education} \\ & - \text{national advertising} - \text{commuting costs} - \text{cost of urbanization} \\ & - \text{cost of auto accidents} - \text{cost of water, air, and noise pollution} \\ & - \text{loss of wetlands and farmlands} - \text{depletion of nonrenewable resources} \\ & - \text{long-term environmental damage} + \text{net capital growth} \\ & + \text{change in net intergenerational position} \end{aligned}$$

Net National Welfare is an example of a measure that begins with GDP and makes adjustments:

$$\begin{aligned} \text{NNW} = & \text{GDP} + \text{nonmarket output} - \text{externality costs} \\ & - \text{pollution abatement and cleanup costs} - \text{depreciation of created capital} \\ & - \text{depreciation of natural capital} \end{aligned}$$

Visit http://www.foe.co.uk/campaigns/sustainable_development/progress/make-own.html for an opportunity to design your own welfare index based on the things you deem important.

Most of the alternative indexes have diverged from GDP during the past three decades. For example, the Genuine Progress Indicator suggests that GDP is out of line with true progress by \$7 trillion, and GPI per capita has followed a mostly downward trend since 1977, even as GDP per capita has increased.¹³ GDP calculations are relevant to employment and productivity, but a measure of social welfare would serve as a better guide for decisions that aim to improve our quality of life. Of course, politicians have a tendency to prefer the relatively high GDP values, and they have largely dismissed arguments by economists, such as Nobel laureate James Tobin, about the need to seek alternative indexes. Lobbying efforts by economists and groups, such as Redefining Progress,¹⁴ continue, so one or more of these many available alternatives may eventually replace GDP as the focus of media attention and policymaking.

¹² An index similar to the Gini coefficient.

¹³ See www.redefiningprogress.org/publications/gpi_march2004update.pdf.

¹⁴ See www.redefiningprogress.org.

CONCLUSION

Gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile.

—Robert F. Kennedy, 1968¹⁵

Gross domestic product and national income are valid and useful measures of output and economic activity. However, despite their central roles as gauges for success, they do not accurately reflect well-being. Consider the median income in Shenandoah, a section of East Baton Rouge parish in Louisiana: \$73,536. This figure surpasses the \$43,527 median income for the United States as a whole by a generous \$30,009 and indicates a high volume of output in nearby chemical, plastics, oil, and gas industries. In fact, Louisiana workers are rated among the most productive workers in the nation.¹⁶ Even so, the high levels of income and output and the correspondingly low unemployment rate in Shenandoah may not fully explain the overall quality of life there. Shenandoah borders an industrial corridor between Baton Rouge and New Orleans that has been dubbed Cancer Alley. The environmental watchdog Web site Scorecard.org ranks East Baton Rouge first among Louisiana parishes (land areas similar to counties) in the release of lead compounds into the air. The fact that East Baton Rouge is among the worst 10 percent of U.S. counties in terms of emissions of carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, and volatile organic compounds may influence the well-being of residents in ways that cannot be captured in income and output figures. In any location, GDP rises with smoke-blackened skies, broken homes that force both parents to work full time, disease, and disaster, and wise policymakers will consult alternative measures of progress.

DISCUSSION STARTERS

1. The CIA uses GDP as an indicator of economic activity in countries around the world. How would you explain to a noneconomist CIA director what GDP can and cannot tell the CIA about those countries?
2. Prostitution, gambling, and some types of drug use are legal in some countries and illegal in others. What implication does this have for international GDP comparisons? What other issues might cloud such comparisons?
3. In 1996, champion bicycle racer Lance Armstrong was diagnosed with cancer and spent, perhaps, \$60,000 on surgery and chemotherapy. Each year

¹⁵ See www.rfkmemorial.org/lifevision/rfkquotes/.

¹⁶ See www.ibervillechamber.org/about.html.