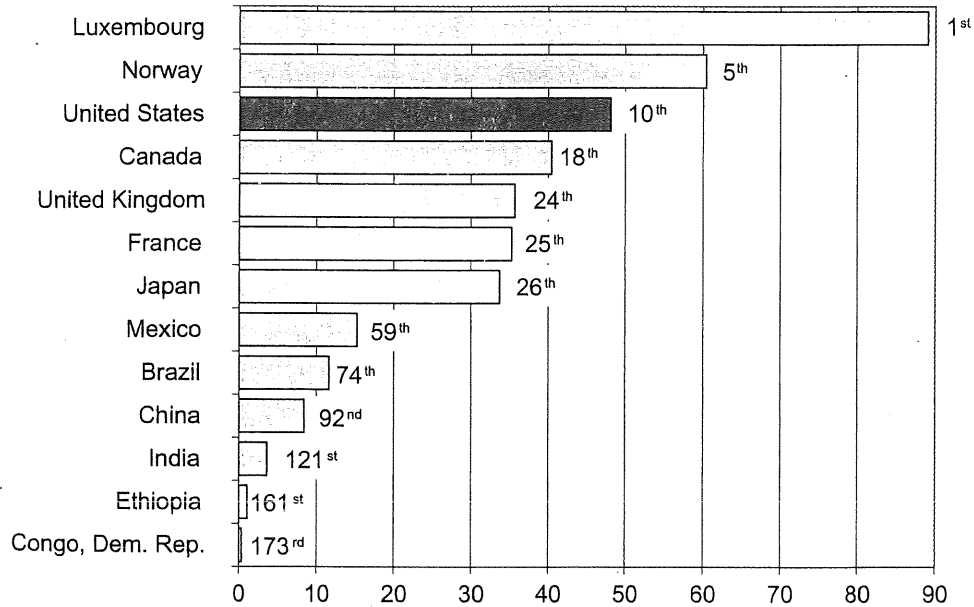


15. GDP PER CAPITA

What it is: Media stories of economic performance frequently refer to gross domestic product (GDP). A country's GDP per capita measures economic production per person per year, which gives us an idea of the average material living standards in the country. While GDP is perhaps the most commonly used macroeconomic metric, it does not necessarily measure well-being. We discuss how GDP is calculated in Chapter 20 and about the limitations of, and alternatives to, GDP in Chapter 21.

The results: The United States ranks tenth, with a GDP per capita of around \$48,000. Luxembourg has the world's highest GDP per capita at around \$90,000, and the Democratic Republic of the Congo has the lowest, at only \$370.

GDP per Capita, 2011 (Thousands of Dollars)



Source: World Bank, World Development Indicators database.

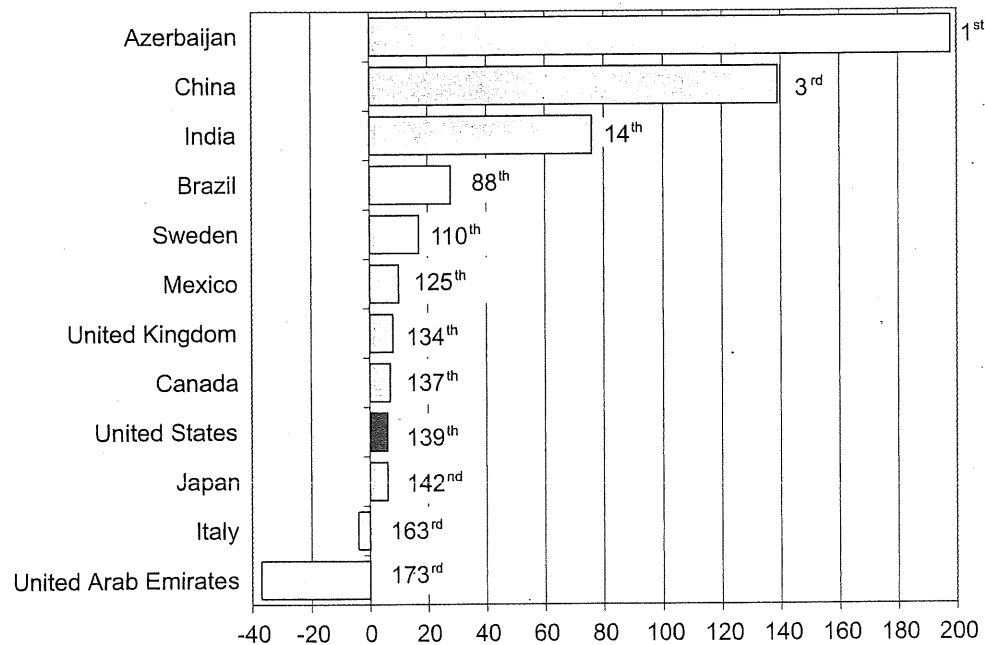
Data are adjusted for purchasing power differences across countries (e.g., a dollar in India buys more than a dollar in the United States).

16. RECENT GROWTH RATE OF GDP PER CAPITA

What it is: In macroeconomics, we seek to explain not only why some countries have a higher GDP per capita but also what conditions lead to strong GDP growth rates. In this graph we compare the growth in GDP per capita, after adjusting for inflation, across countries over the ten-year period 2002–2011. We discuss measuring GDP growth rates in Chapter 20 and theories of GDP growth in Chapter 32.

The results: GDP per capita over 2002–2011 grew rapidly in some countries, slowly in others, and even declined in several countries. The highest growth in GDP per capita occurred in Azerbaijan, primarily from oil and gas development, with high growth also in China, Argentina, Ethiopia, and India. The fastest growth among developed countries took place in Sweden. Countries with declines in GDP per capita include Italy, Haiti, Iraq, and the Bahamas.

Growth in GDP per Capita, 2002–2011 (Percent)



Source: World Bank, World Development Indicators database.

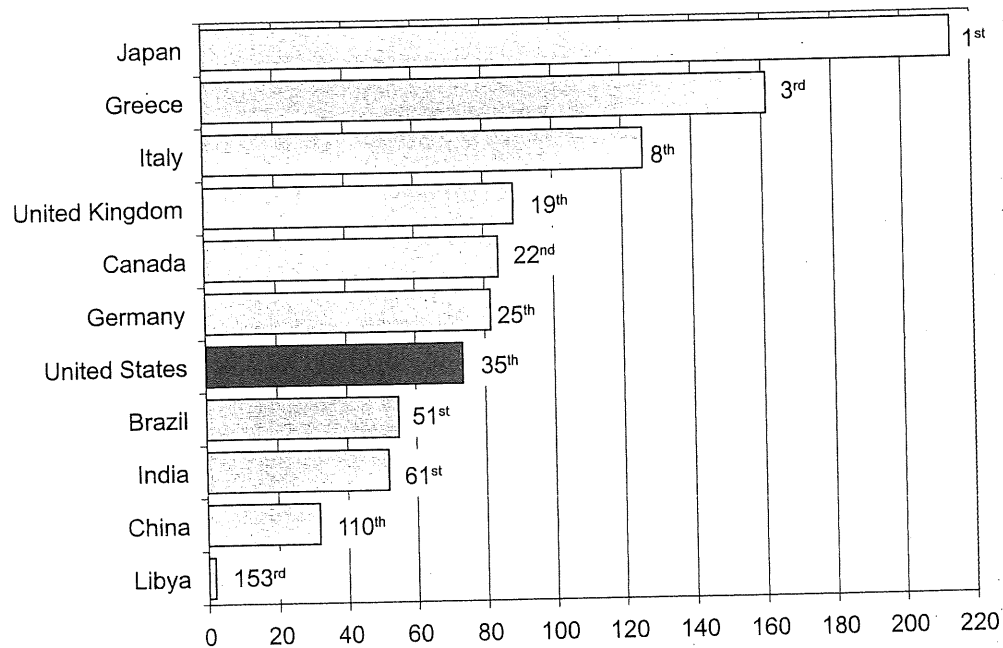
Data are adjusted for purchasing power differences.

18. GOVERNMENT DEBT

What it is: The level of government debt has been a focus of media stories in recent years. What matters is not so much the size of debt in dollars but government debt relative to a country's GDP. This variable considers the amount of debt owed by the governments of different countries, including debts owed to domestic and foreign entities. What level of debt is a problem is a topic we discuss in more detail in Chapter 31.

The results: Japan has the highest government debt in the world, measured as a percentage of GDP, followed by Zimbabwe and Greece. The United States has the thirty-fifth-highest debt, but many other developed countries have higher debt, including Singapore, France, Canada, and Germany. Most developing countries have relatively low government debt.

Government Debt (Percent of GDP)



Source: United States Central Intelligence Agency, *CIA World Factbook*.

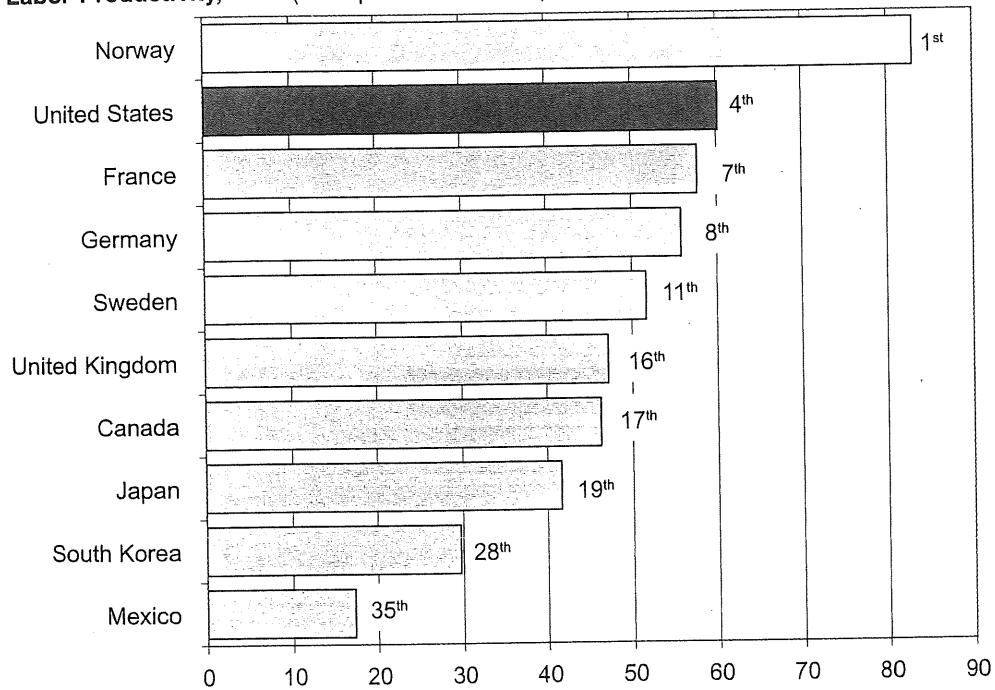
Data are mostly 2012 estimates.

19. LABOR PRODUCTIVITY

What it is: One measure of the economic efficiency of a country is labor productivity. This is calculated by dividing a country's GDP by an estimate of the total number of hours worked. Thus labor productivity tells us how many dollars of GDP are generated for each hour worked. We present more about labor productivity in Chapter 10.

The results: Data on labor productivity are available for only 35 countries. Norway has the highest labor productivity in the world. The United States ranks fourth, behind Luxembourg and Ireland. Productivity is slightly lower in France and Germany. Less developed countries have lower labor productivity. We see that productivity in Mexico is only about one-third of the U.S. level.

Labor Productivity, 2011 (GDP per Hour Worked)



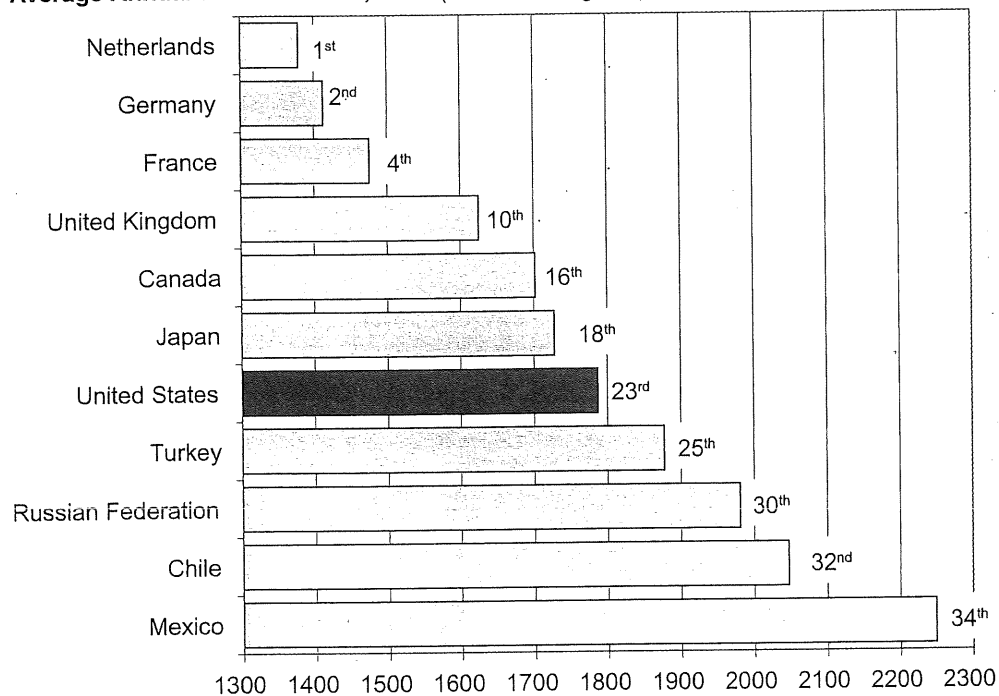
Source: Organisation for Economic Co-operation and Development, OECD online statistical database.

20. AVERAGE ANNUAL HOURS WORKED

What it is: Even if two countries have the same labor productivity, their GDP will differ if the number of hours worked are different. This graph shows the average number of hours worked each year by full-time employees. Note that this includes only hours actually worked; vacations, holidays, and sick days are excluded. Thus the average annual hours worked in a country may be high if work expectations are more stringent and time off is limited. Work hours may also be high if workers choose to work long hours. We discuss work hours further in Chapters 10 and 23.

The results: Data on hours worked are available for only 34 countries. The average annual hours worked per full-time employee are lowest in the Netherlands. Other countries with relatively low annual work hours are Germany, Norway, France, and Denmark. One reason for the low work hours in these countries is federal laws that mandate minimum vacation times and paid holidays. In the United States, where such laws do not exist, average work hours are higher. Work hours tend to be highest among countries with lower levels of GDP per capita.

Average Annual Hours Worked, 2011 (Lowest to Highest)



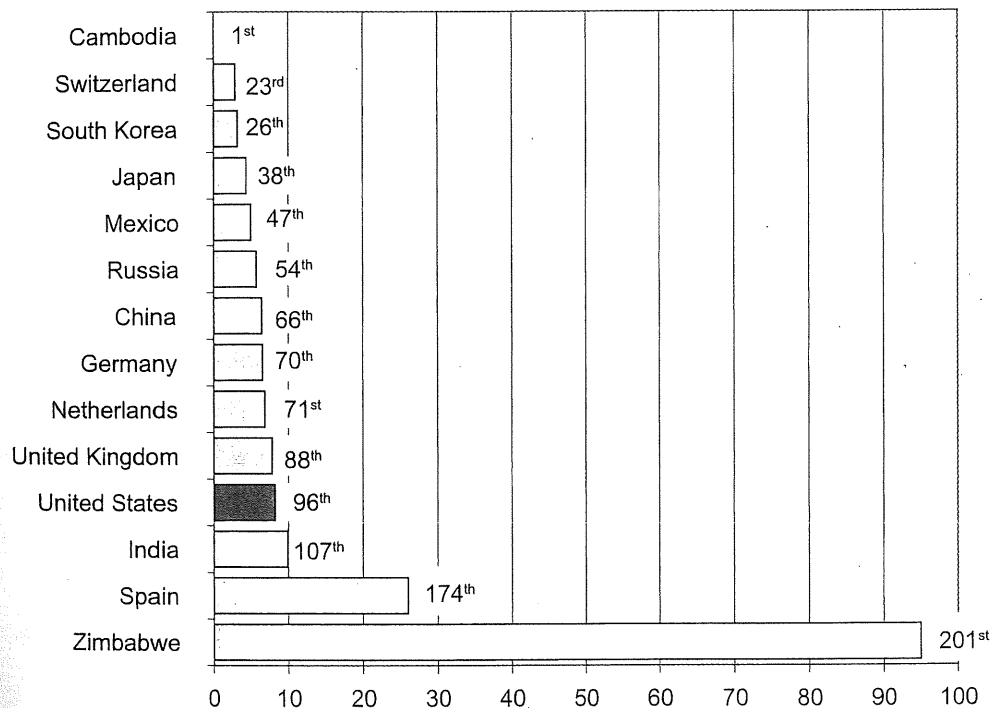
Source: Organisation for Economic Co-operation and Development. OECD online statistical database.

21. UNEMPLOYMENT RATE (PERCENT OF TOTAL WORKFORCE)

What it is: The unemployment rate in a country is an important macroeconomic metric. Not only does having a job provide a source of income, but it also provides a sense of identity and contributes to overall well-being. Estimating the unemployment rate is somewhat complex. In Chapter 23 we discuss issues involved in estimating the unemployment rate including defining what it means to be in the workforce.

The results: Unemployment rates vary tremendously across countries. Cambodia has the lowest official unemployment rate at 0.2 percent. While many poor countries, such as Zimbabwe, Haiti, and Kenya, have very high unemployment rates (30 percent or more), other poor countries such as Cuba and Bhutan, have rather low unemployment rates, at around 4 percent. The unemployment rate in the United States, usually in the range of 4–6%, rose considerably in the 2007–9 recession, and has since declined only slowly.

Unemployment Rate, 2011 (Percent of Labor Force, Lowest to Highest)



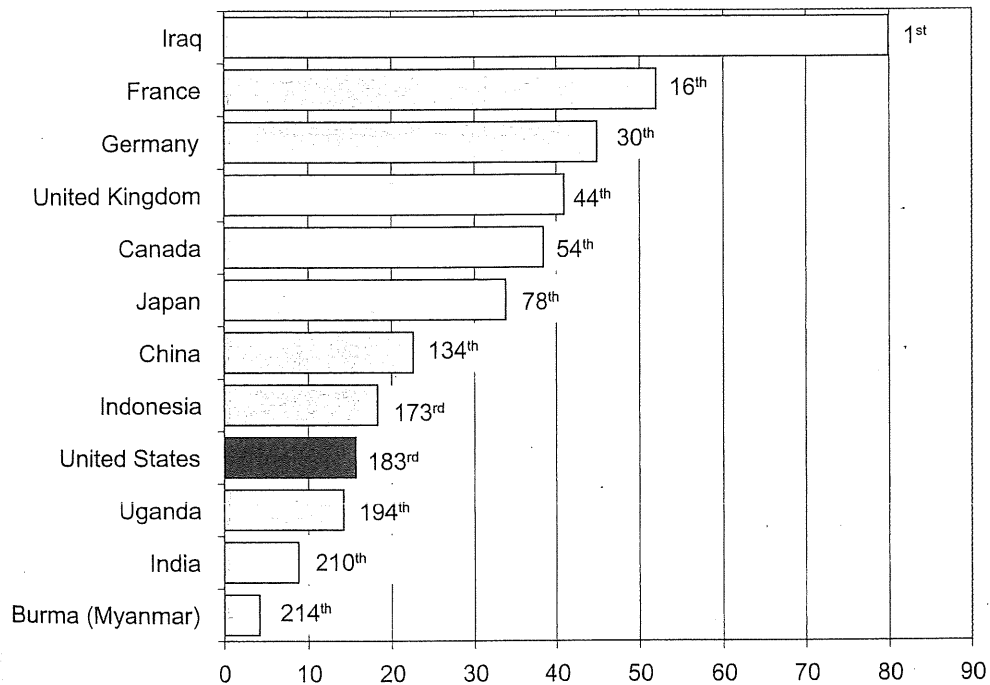
Source: Central Intelligence Agency, *CIA World Factbook*.

23. TOTAL TAX REVENUES (PERCENT OF GDP)

What it is: Tax policies are among the most significant ways a government can influence the well-being of the citizens, as we discuss in Chapters 12 and 25. The overall rate of taxation, expressed as a percentage of GDP, includes taxes collected at the federal, state, and local levels.

The results: Overall tax revenues vary significantly across countries. While Western European countries tend to have relatively high taxes, some other countries with surprisingly high taxes (more than 40 percent of GDP) include Iraq, Bolivia, and Bhutan. The United States has one of the lowest overall tax rates in the world—by far the lowest of any major industrialized country. The countries with the lowest tax revenues (less than 15 percent of GDP) tend to be relatively poor countries in Africa and Asia.

Total Taxes, 2012 (Percent of GDP)



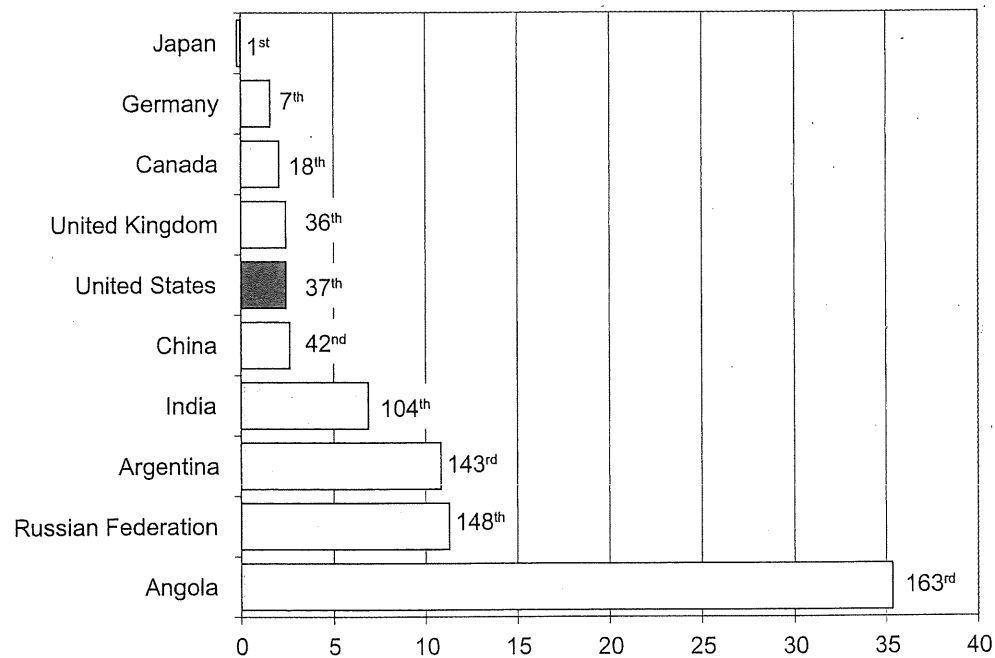
Source: Central Intelligence Agency, *CIA World Factbook*.

22. INFLATION

What it is: The rate of inflation summarizes how average prices change in a country in one year. For example, an inflation rate of 5 percent means that average prices increased by 5 percent that year. We discuss how to adjust data from different years for inflation in Chapter 20 and then focus on macroeconomic theories of inflation in Chapters 26 and 27.

The results: Over the period 2002–2011, Japan had the lowest inflation rate in the world, with prices actually declining slightly during this time. However, this is not necessarily a good thing, as we see later in the book. A low and stable—but not negative—inflation rate is generally considered one of the main macroeconomic policy goals. Most developed countries have generally been successful in controlling inflation in recent years. High and fluctuating inflation rates in a country are a sign of macroeconomic instability.

Average Annual Inflation Rate, 2002–2011 (Lowest to Highest)



Source: World Bank, World Development Indicators database.

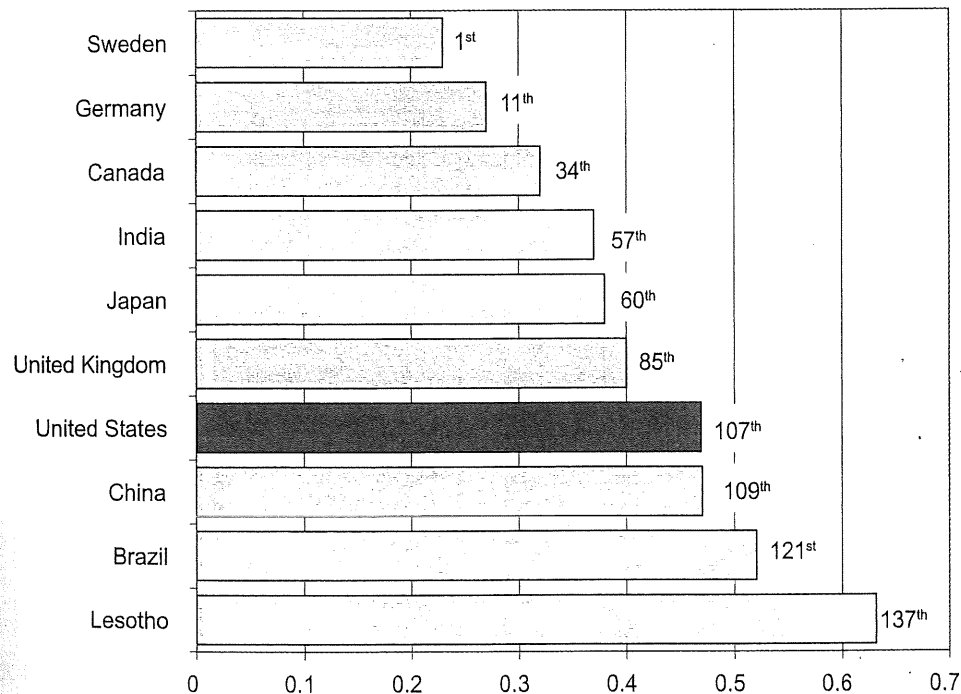
The average inflation rate is calculated as the average of the inflation rate for each year from 2002 to 2011.

25. INCOME INEQUALITY (GINI COEFFICIENT)

What it is: A Gini coefficient is a measure of economic inequality in a country. It is most commonly applied to the distribution of income, but it can also be apply to wealth distribution or other variables. It can range from 0 (everyone in the country has the same exact income) to 1 (one person receives all the income in a country). We learn more about Gini coefficients and economic inequality in Chapters 11 and 32.

The results: Scandinavian countries such as Sweden, Norway, and Finland tend to be the most equal countries in the world, by income. Japan is also in this group, in a number of equality measures (not all shown here, but discussed in Chapter 32). The United States is the most economically unequal developed country. Several African countries, including Botswana, Lesotho, Sierra Leone, and South Africa are the most unequal countries in the world.

Gini Coefficient (Most Equal to Least Equal)



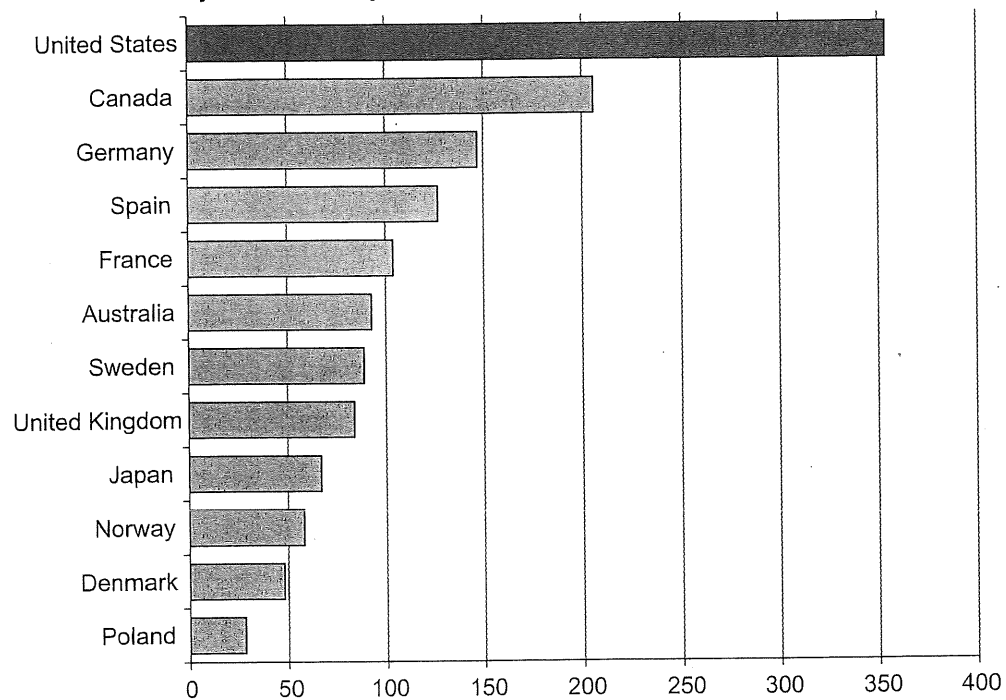
Source: Central Intelligence Agency, *CIA World Factbook*.

26. CEO PAY VS. WORKER PAY: INTERNATIONAL COMPARISONS

What it is: In addition to comparing corporate profits to worker pay, we can look at the pay difference between chief executive officers (CEOs) and workers. The graph below shows the ratio of average CEO compensation to the average pay of “rank-and-file” workers, in several industrialized countries. The ratios are based on data from 2011 and 2012.

The results: In the United States, average CEO pay is more than 350 times higher than average worker pay. (This difference has rapidly increased in the past 50 years—in the mid-1960s average CEO pay was only about 20 times that of the average worker.) In other industrialized countries, CEOs today make significantly more than rank-and-file workers, but pay differences are not as pronounced. For example, in France CEOs make, on average, 100 times more than workers, while in Denmark CEOs make about 50 times worker pay.

Ratio of CEO Pay to Worker Pay



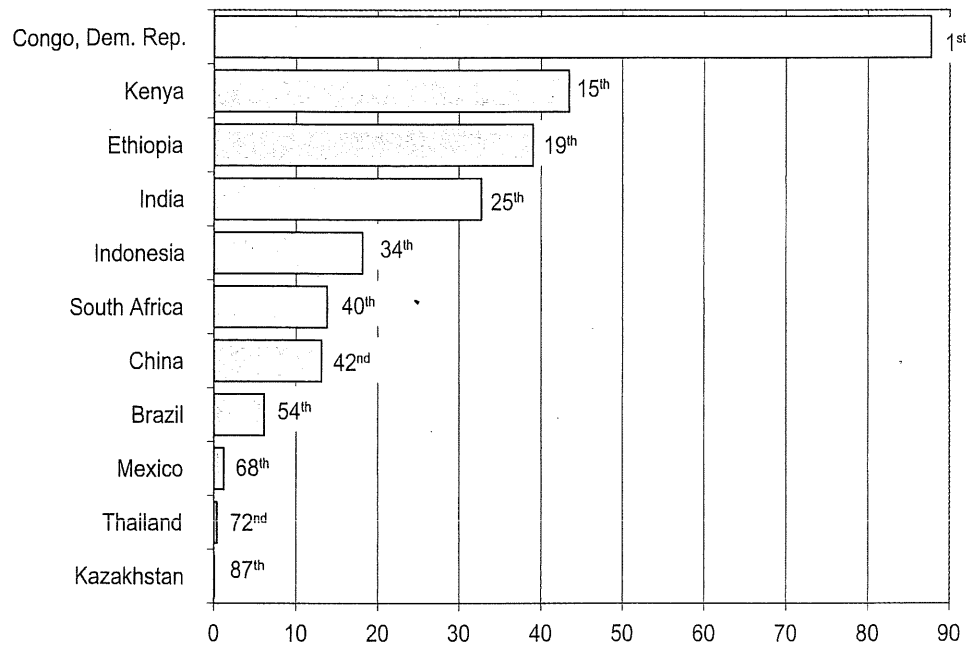
Source: AFL-CIO, Executive Paywatch, CEO-to-Worker Pay Ratios Around the World.

27. ABSOLUTE POVERTY

What it is: The \$1-per-day poverty line has been defined by the United Nations as a measure of absolute poverty. One of the Millennium Development Goals set by the United Nations is to halve the number of people in the world living below this poverty line between 1990 and 2015. This goal has already been met, mainly due to progress in China and India. We discuss poverty and economic development in Chapter 32.

The results: Note that this is the only graph in this chapter that does not include the United States or any other developed countries (essentially no one in developed countries lives below the dollar-a-day poverty line). A majority of people do live below that poverty line in 12 countries, including Rwanda, Nigeria, Mozambique, and Mali. About one-third of India's population and 13 percent of China's population still live below the dollar-a-day poverty line. A small portion of the population lives in absolute poverty in Argentina, Hungary, Poland, Thailand, and Uruguay.

Percent of Population Living Below \$1/day Poverty Line



Source: United Nations, Millennium Development Goals Indicators database.

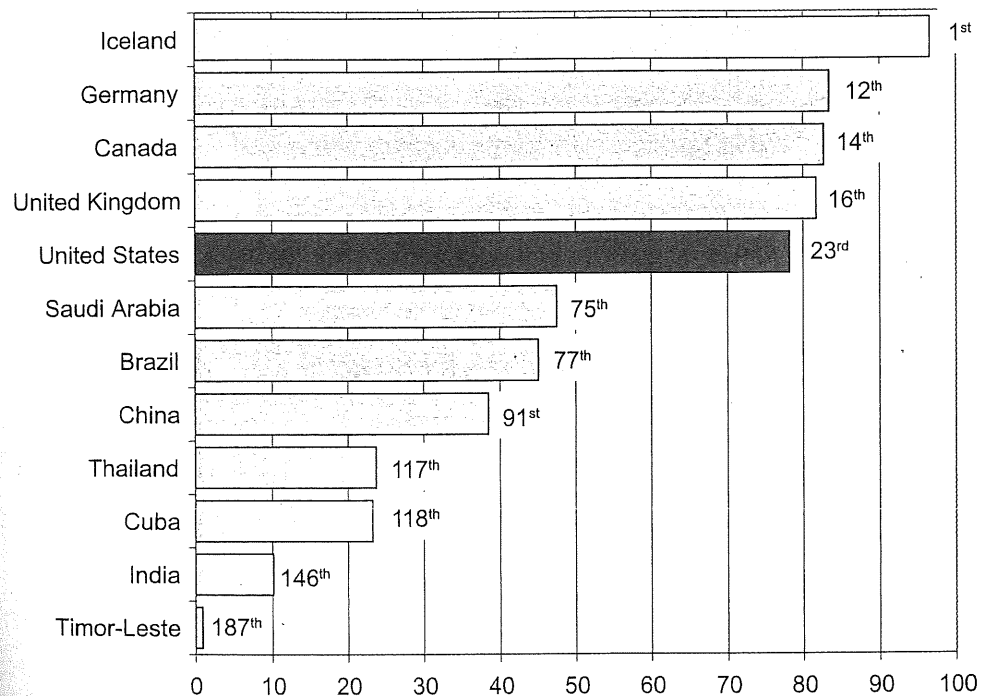
Data are for the most recent year available, generally 2008 or 2009.

29. INTERNET USERS

What it is: The percentage of people who have access to the Internet provides an indication of a country's level of technological development. As we discuss in Chapter 32, technology has long been recognized as one of the drivers of economic growth.

The results: Access to the Internet may not be as widespread as you think. While near-universal access occurs in a few countries, such as Iceland, Norway, and the Netherlands, in most developed countries access rates are about 70–85 percent. Middle-income countries generally have access rates around 30–50 percent. Forty countries, most of them poor African countries, have access rates of less than 10 percent.

Internet Users per 100 People, 2011



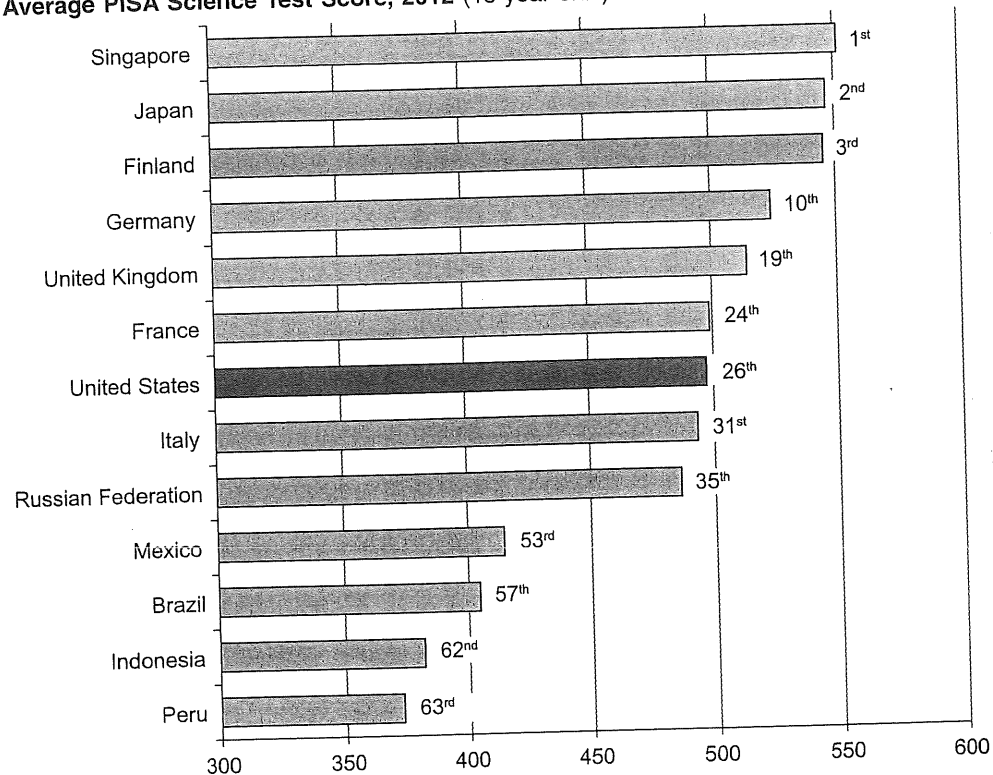
Source: World Bank, World Development Indicators database.

30. EDUCATIONAL PERFORMANCE

What it is: Next we look at the educational performance of students in different countries. To compare across countries, we present data from the Programme for International Student Assessment, which administers standardized math, science, and reading tests to 15-year-olds in over 60 countries every three years. The graph below provides results from the science test. The country rankings were relatively similar for the science test. The country rankings were relatively similar for the math and reading tests, with some variations (e.g., the United States ranked seventeenth on the reading test and thirty-first on the math test).

The results: Students in Asian countries tended to achieve the highest test scores, including China, Singapore, Japan, and South Korea. Among European countries, students received high scores in Finland, the Netherlands, and Germany. The scores from the United States were average for developed countries. For less developed countries, scores tended to be lower.

Average PISA Science Test Score, 2012 (15-year-olds)



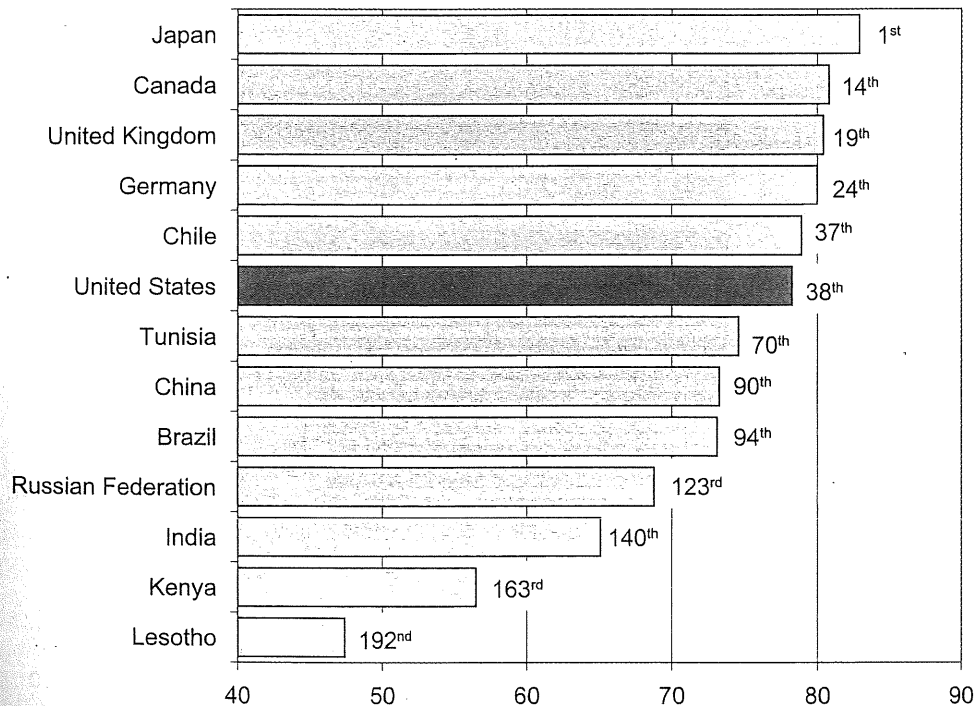
Source: Organisation for Economic Co-operation and Development, Programme for International Student Assessment, PISA 2009 Key Findings.

31. LIFE EXPECTANCY

What it is: Average life expectancy at birth is a common measure of health outcomes in a country. We discuss health as one component of well-being indices in Chapter 21 and as a topic of economic development in Chapter 32.

The results: Life expectancy at birth now exceeds 80 years in over 20 countries, including Japan, France, Spain, and Greece. For a developed country, the United States has a comparatively low life expectancy, even lower than some middle-income countries such as Costa Rica, Cuba, and Chile. Life expectancy is the lowest, below 50 years, in several African countries, including Zambia, Sierra Leone, and Lesotho.

Life Expectancy at Birth, 2010



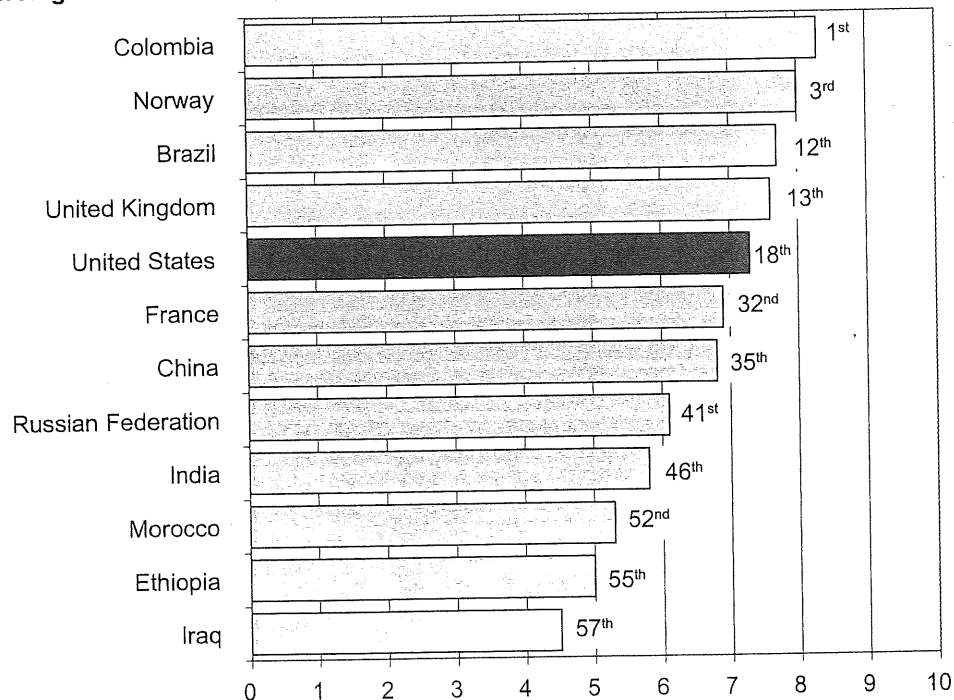
Source: World Bank, World Development Indicators database.

32. SUBJECTIVE WELL-BEING

What it is: Researchers are increasingly using surveys to measure well-being or happiness directly. The most common approach is to ask people to rate their overall satisfaction with their lives, on a scale from 1 (dissatisfied) to 10 (satisfied). The responses are referred to as “subjective well-being.” We discuss subjective well-being in more detail in Chapter 21.

The results: According to the most recent data, which cover 57 countries, Colombia has the highest level of average subjective well-being. Other relatively happy countries include Norway, Mexico, Canada, and Guatemala. Happiness levels in the United States are about average for a developed country. Happiness levels are relatively low in the poorest developing countries, such as Iraq, Zambia, and Rwanda, as well as Eastern European countries, such as Bulgaria, Ukraine, and Romania.

Average Life Satisfaction, 2005–2008 Results (1 = Dissatisfied, 10 = Satisfied)



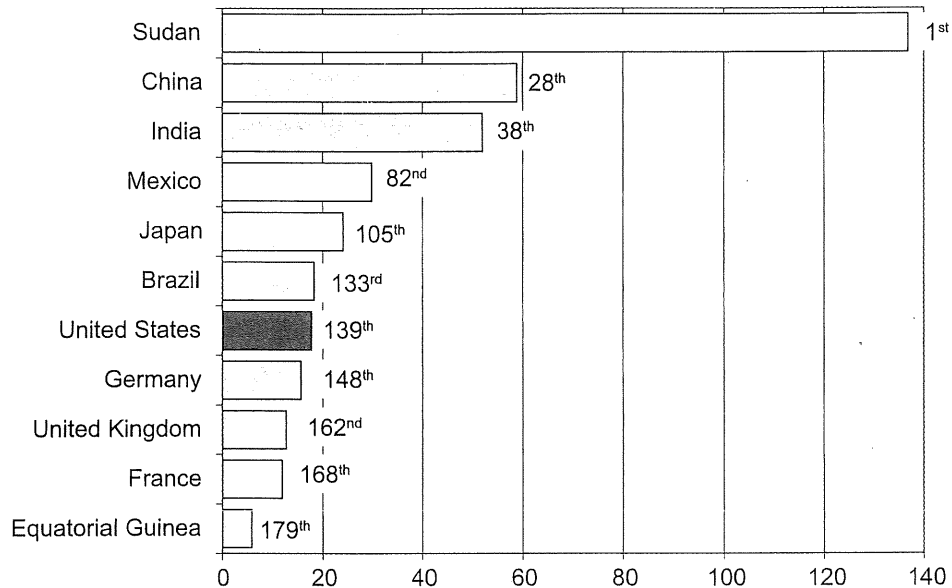
Source: World Values Survey, online database.

34. LOCAL AIR QUALITY

What it is: While CO₂ emissions contribute to climate change, breathing air with elevated levels of CO₂ does not cause any adverse health effects. Local air pollutants, on the other hand, can cause numerous health effects, including asthma, lung cancer, and heart problems. One of the most important local air pollutants is particulate matter, which is emitted from power plants, industrial factories, motor vehicles, and other sources. Particulate matter pollution can be reduced through effective environmental regulations and technology. We discuss pollution further in Chapters 13 and 33.

The results: A country with high CO₂ emissions does not necessarily have poor local air quality. The United States is a prime example—CO₂ emissions are high, but local air quality is relatively good due to environmental laws and modern technologies. Other developed countries have as good, or better, local air quality. Developing countries can have good or poor local air quality, depending on their level of development, regulations, and technologies.

Average National Particulate Matter Concentration, 2011 (Micrograms per Cubic Meter)



Data are for particulate matter smaller than 10 micrometers, referred to as PM₁₀. For reference, the European Union pollution standard for average PM₁₀ is 40 micrograms/cubic meter ($\mu\text{g}/\text{m}^3$); California has a stricter standard of 20 $\mu\text{g}/\text{m}^3$.