



Comparing Levels of Development

Countries are unequally endowed with **natural capital**. For example, some countries benefit from fertile agricultural soils, while others have to put a lot of effort into artificial soil amelioration. Some countries have discovered rich oil and gas deposits within their territories, while others have to import most fossil fuels. In the past a lack or wealth of natural capital made a big difference in countries' development. But today a wealth of natural capital is not the most important determinant of development success. Consider such high-income countries as the Republic of Korea or Japan. Their high economic development allows them to use their limited natural resources much more productively (efficiently) than would be possible in many less developed countries. The **productivity** with which countries use their productive resources—**physical capital, human capital, and natural capital**—is widely recognized as the main indicator of their level of **economic development**.

Theoretically, then, economists comparing the development of different countries should calculate how productively they are using their capital. But such calculations are extremely challenging, primarily because of the difficulty of putting values

on elements of natural and human capital. In practice economists use **gross national product (GNP) per capita** or **gross domestic product (GDP) per capita** for the same purpose. These statistical indicators are easier to calculate, provide a rough measure of the relative productivity with which different countries use their resources, and measure the relative material welfare in different countries, whether this welfare results from good fortune with respect to land and natural resources or superior productivity in their use.

Gross Domestic Product and Gross National Product

GDP is calculated as the value of the total final output of all goods and services produced in a single year within a country's boundaries. GNP is GDP plus incomes received by residents from abroad minus incomes claimed by nonresidents.

There are two ways of calculating GDP and GNP:

- By adding together all the incomes in the economy—wages, interest, profits, and rents.
- By adding together all the expenditures in the economy—consumption,

investment, government purchases of goods and services, and net exports (exports minus imports).

In theory, the results of both calculations should be the same. Because one person's expenditure is always another person's income, the sum of expenditures must equal the sum of incomes. When the calculations include only incomes received or expenditures made by a country's citizens, the result is GNP. When the calculations are made of all incomes (or all expenditures) that originated within a country's boundaries, including those of foreign citizens, the result is GDP.

GNP may be much less than GDP if much of the income from a country's production flows to foreign persons or firms. For example, in 1994 Chile's GNP was 5 percent smaller than its GDP. If a country's citizens or firms hold large amounts

of the stocks and bonds of other countries' firms or governments, and receive income from them, GNP may be greater than GDP. In Saudi Arabia, for instance, GNP exceeded GDP by 7 percent in 1994. For most countries, however, these statistical indicators differ insignificantly.

GDP and GNP can serve as indicators of the scale of a country's economy. But to judge a country's level of economic development, these indicators have to be divided by the country's population.

GDP per capita and **GNP per capita** show the approximate amount of goods and services that each person in a country would be able to buy in a year if incomes were divided equally (Figure 2.1). That is why these measures are also often called "per capita incomes."

In the data tables at the end of this book GNP per capita is shown not only in



U.S. dollars but also in PPP dollars—that is, adjusted with the help of a **purchasing power parity (PPP)** conversion factor. The PPP conversion factor shows the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the United States. By applying this conversion factor, one can, for example, convert a country's **nominal** GNP per capita (expressed in U.S. dollars in accordance with the market exchange rate of the national currency) into its **real** GNP per capita (an indicator adjusted for the difference in prices for the same goods and services between this country and the United States, and independent of the fluctuations of the national currency exchange rate). GNP in PPP terms thus provides a better comparison of average income or consumption between economies.

In developing countries real GNP per capita is usually higher than nominal GNP per capita, while in developed countries it is often lower (Table 2.1). Thus the gap between real per capita incomes in developed and developing countries is smaller than the gap between nominal per capita incomes.

Although they reflect the average incomes in a country, GNP per capita and GDP per capita have numerous limitations when it comes to measuring people's actual well-being. They do not show how equitably a country's income is distributed.

They do not account for pollution, environmental degradation, and resource depletion. They do not register unpaid work done within the family and community, or work done in the **shadow (gray) economy**. And they attach equal importance to “goods” (such as medicines) and “bads” (cigarettes, chemical weapons) while ignoring the value of leisure and human freedom. Thus, to judge the relative quality of life in different countries, one should also take into account other indicators showing, for instance, the distribution of income and incidence of poverty (see Chapters 5 and 6), people's health and longevity (Chapter 8), access to education (Chapter 7), the quality of the environment (Chapter 10), and more. Experts also use composite statistical indicators of development (Chapter 15).

What are the main limitations of per capita income as a measure of development?

Grouping Countries by Their Level of Development

Different organizations use different criteria to group countries by their level of

Table 2.1 Nominal and real GNP per capita in various countries, 1995

Country	GNP per capita (U.S. dollars)	GNP per capita (PPP dollars)
India	340	1,400
China	620	2,920
Russia	2,240	4,480
United States	26,980	26,980
Germany	27,510	20,070
Japan	39,640	22,110

development. The World Bank, for instance, uses GNP per capita to classify countries as low-income (GNP per capita of \$765 or less in 1995), middle-income (including lower-middle-income, \$766 to \$3,035, and upper-middle-income, \$3,036 to \$9,385), or high-income (\$9,386 or more; Map 2.1).

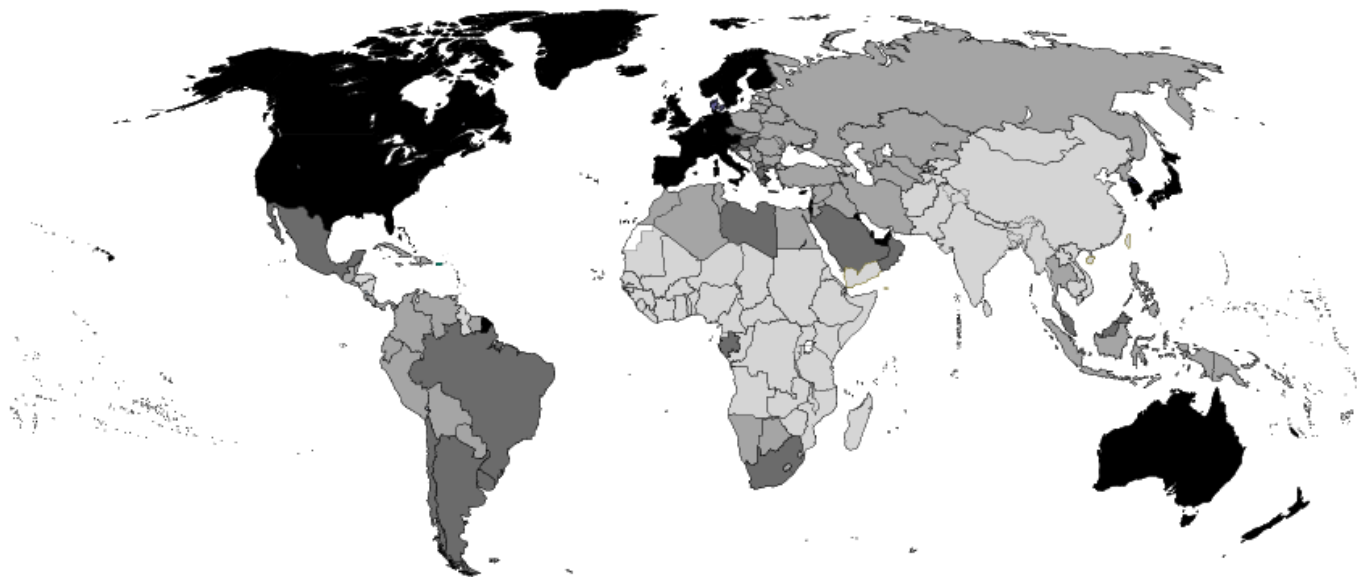
A more popular, though apparently more disputable, approach involves dividing all countries into “developing” and “developed”—despite the general understanding that even the most developed countries are still undergoing develop-

ment. Dividing countries into “less developed” and “more developed” does not help much either, because it is unclear where to draw the line between the two groups. In the absence of a single criterion of a country’s development, such divisions can only be based on convention among researchers. For example, it is conventional in the World Bank to refer to low-income and middle-income countries as “developing,” and to refer to high-income countries as “industrial” or “developed.”

The relatively accurate classification of countries into “developing” and “devel-

Map 2.1

Gross national product per capita, 1995



oped” based on their per capita income does not, however, work well in all cases. There is, for instance, a group of “high-income developing countries” that includes Israel, Kuwait, Singapore, and the United Arab Emirates. These countries are considered developing because of their economic structure or because of the official opinion of their governments, although their incomes formally place them among developed countries.

Another challenge is presented by many of the countries with “transition” or “formerly planned” economies—that is, countries undergoing a transition from centrally planned to market economies. On the one hand, none of these coun-

tries has achieved the established threshold of high per capita income. But on the other, many of them are highly industrialized. This is one reason their classification by the World Bank is currently “under review.” Note that in the World Bank’s *World Development Report 1982* these same countries were classified as “industrial nonmarket,” and in current United Nations publications most of them are still grouped among “industrial” countries.

In 1995 less than 1 of every 6 people in the world lived in high-income (developed) countries, and almost 2 of every 6 lived in **transition countries**—including 21 percent of the world population in China alone (Figure 2.2).

What are some of the problems associated with grouping countries into “developed” and “developing”?

Figure 2.2

Distribution of world population among countries grouped by GNP per capita, 1995

