



Indicators of Development Sustainability

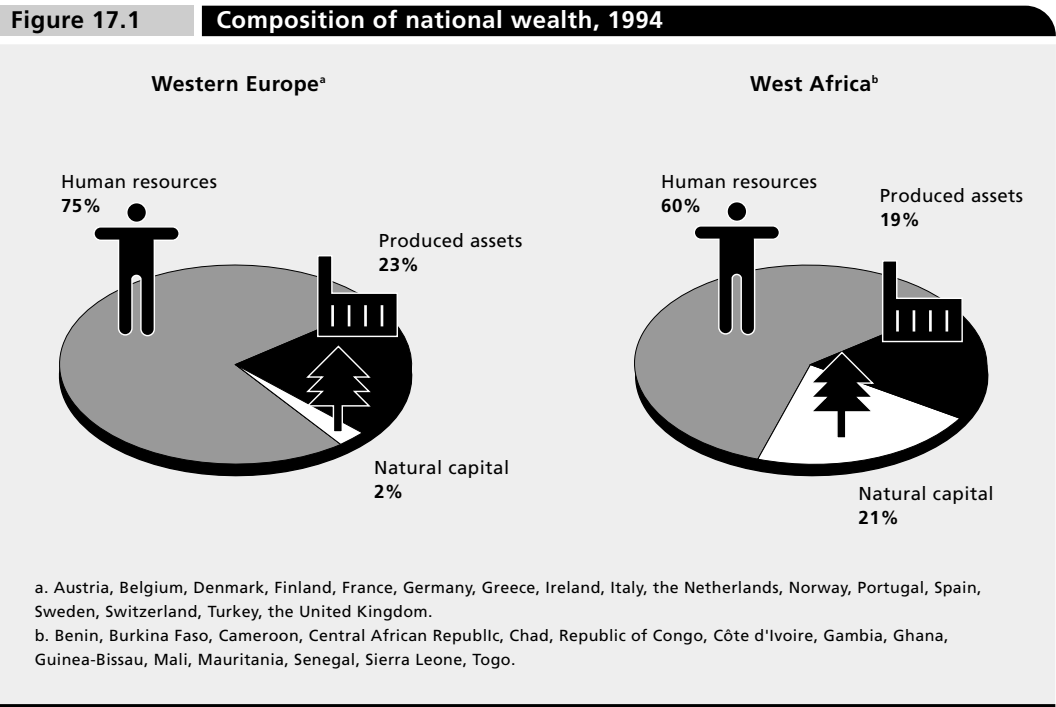
Classical economists consistently identified three sources and components of national wealth: land, labor, and capital. By contrast, economists of the 20th century preferred to focus on **capital**, understood to be **physical capital** only—the stock of structures and equipment used for production. Thus expenses aimed at adding to this stock were the only expenses categorized as **investment**. Most other expenses, such as those for education or for environmental protection, were considered to constitute consumption and treated as deductions from potential capital accumulation.

A better understanding of the need for sustainable development first led to attempts to “green” national accounts—that is, to account for changes in **natural capital** in calculations of **gross domestic product** and **gross national product**—then to the development of statistical methods to account for changes in a country’s **human capital**. Although valuation methods for natural and human capital are still imperfect, they allow experts to explore some critical development issues. These include the changing composition of a country’s national wealth and operational indicators of sustainable—or unsustainable—development.

Composition of National Wealth

According to a number of recent World Bank studies, physical capital (produced assets) is not the main—much less the only—component of a country’s wealth. Most important for all countries are human resources, which consist of “raw labor,” determined mainly by the number of people in a country’s **labor force**, and human capital (Figure 17.1). Natural capital is another important component of every nation’s wealth.

A country’s level of development determines the roles played by the different components of its national wealth. The dominance of human capital is particularly marked in the most developed countries, where natural capital accounts for just 2–5 percent of aggregate wealth. By contrast, in West Africa—one of the world’s poorest regions—natural capital still prevails over physical capital, and the share of human resources is among the lowest in the world despite a large population (see Figure 17.1). Comparing West Africa to Western Europe is particularly indicative because in absolute terms the two regions have roughly the same per capita value for natural capital. Thus the striking difference in the composition of their national



wealth can be entirely attributed to the fact that the average West European has 13–14 times as much human and physical capital at his or her disposal.

Accumulation of National Wealth As an Indicator of Sustainable Development

Over the past 10 years the concept of sustainable development has become more comprehensive and measurable. A recent World Bank study defined sustainable development as “a process of managing a portfolio of assets to preserve and enhance the opportunities people face.” The assets that this definition refers to include not just traditionally accounted physical capital, but also

natural and human capital. To be sustainable, development must provide for all these assets to grow over time—or at least not to decrease. The same logic applies to prudent management of a national economy as applies to prudent management of personal property.

With that definition in mind, the main indicator of sustainable (or unsustainable) development might be the “genuine saving rate” or “genuine investment rate,” a new statistical indicator being developed by World Bank experts. Standard measures of wealth accumulation ignore the depletion of, and damage to, **natural resources** such as forests and oil deposits, on the one hand, and investment in one of a nation’s most valuable assets—its people—on the

other. The genuine saving (investment) rate is designed to correct for this shortcoming by adjusting the traditional saving rate downward by an estimate of natural resource depletion and pollution damages (the loss of natural capital), and upward by growth in the value of human capital (which comes primarily from investing in education and basic health services) (see Figure 17.2).

Calculating genuine saving rates for different countries is extremely challenging, particularly because of difficulties in valuing human capital. But the effort is considered worthwhile because of the potential importance of sustainable development indicators for informing and guiding practical policymaking.

World Bank analysis has already shown that many of the most resource-dependent countries seem to have low or negative genuine saving. This will eventually

lead to declining well-being of their citizens if no consistent efforts are made to reverse the trend. The only two “safe” regions of the developing world appear to be South Asia and East Asia and the Pacific, where genuine saving rates in 1970–93 were positive and sometimes topped 15 percent of GNP (Figure 17.3). In developed countries the rates of genuine saving were near 10 percent for much of that period.

It would be totally incorrect to conclude from this analysis that countries should not choose to develop at the expense of depleting their natural resources. However, negative or low genuine saving rates show that a considerable part of **nonrenewable natural resources** has been used irrationally, to the detriment of people’s future well-being. Income from these natural resources has simply been consumed rather than invested in the other components of national

Figure 17.2 Calculating the genuine saving rate

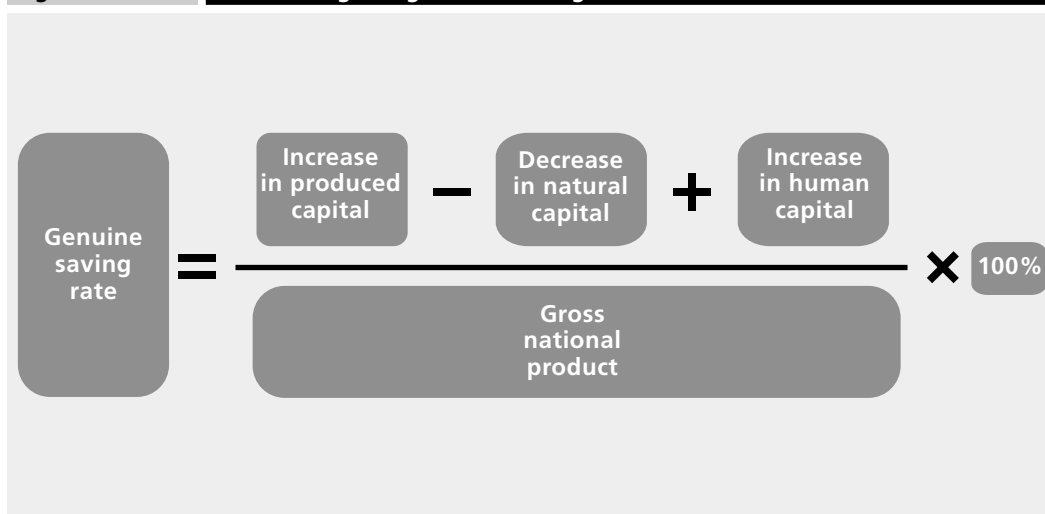
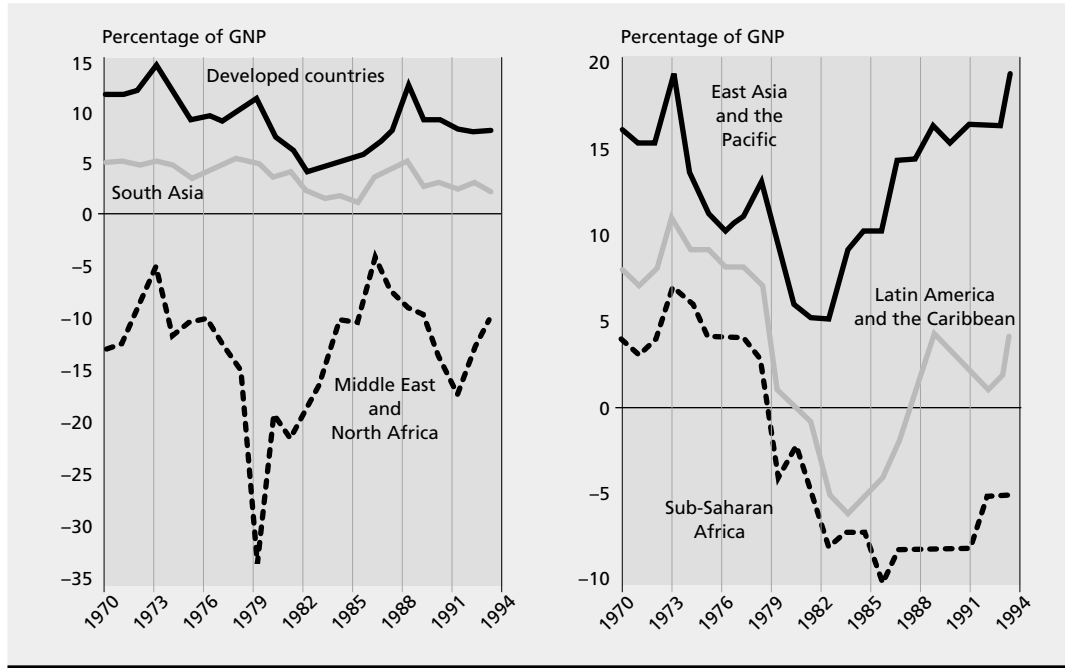


Figure 17.3 Genuine saving (investment) rate: Estimates for 1970–93



wealth—physical capital and human capital. Such investments can boost a country’s development in a sustainable manner. But according to the data in Figure 17.3, most countries in the Middle East and North Africa failed to make such investments in the 1970s and

1980s, when their windfall oil incomes could have been used to substantially build up their long-term economic potential. That kind of development policy is apparently unsustainable and should normally cause concern among policymakers.