development

Development refers to a process that includes and goes beyond economic growth. Whereas growth is defined narrowly as an increase in real income per person, the Nobel laureate Amartya Sen (1999) defines development as the expansion of human freedom, including freedom from hunger, ignorance, political oppression, and disease. Although income clearly matters for development—a richer society can build and staff more schools, courtrooms, and hospitals—it is also clearly not all that matters.

In defining development the challenge is to find measures of social evolution that come closer to Sen's notion of expanding human freedom but are still concrete enough to permit meaningful measurement and study. Making choices about which social goals are emphasized and how their attainment is measured is of necessity a value-laden exercise, and because values vary sharply across cultures and individuals, no measure of development can safely claim to be either universal or entirely objective. Despite this inherent limitation, the inadequacy of economic growth as a measure of development has led to an ongoing effort to find alternative measures of development. This article considers several dimensions of development—economic, human, and social—noting how each has been defined and measured. In each case, we also consider the relationship of development to economic growth.

Economic Development

Economic development includes three dimensions that go beyond rising per capita incomes. The first involves the development of a country's economic system. Economic

development is generally facilitated by a number of structural changes, including urbanization, the rise in the size of firms, the relative decline of the agricultural sector in terms of employment and output with expansion of manufacturing and services, the geographic expansion of markets, and increases in the diversity of goods produced and traded. These changes in the organization of economic activity are the hallmark of permanent shifts in economic activity. Income gains that are not accompanied by these changes, such as natural resource booms, are easily reversed. Furthermore, the expansion of markets and increases in the diversity of goods produced raises welfare by expanding the range of goods available to consumers and providing a form of insurance by diminishing the impact of dramatic changes to the local economy or particular industries.

The second dimension of economic development concerns the distribution of the gains from economic growth. A rise in the average income level means nothing more or less than a rise in national income divided by population size. As such, there is no guarantee that economic growth makes a majority of people better off or results in income gains for the poorest members of society. This point is particularly important for less-developed countries, in which calls for economic growth are motivated largely by the desire to reduce widespread poverty.

The perception that the gains from growth in the 1960s and 1970s were unequally distributed led to calls to redefine development in a manner that placed greater emphasis on poverty and inequality (see, e.g., Streeten 1981). Skepticism about the gains from growth also reflected the influence of economists such as the Nobel laureates W. Arthur Lewis and Simon Kuznets, who argued that industrialization was characterized by an initial period of rising inequality with limited benefits for the poor. In addition, many

economists noted that the way in which growth rates are calculated gives greater weight to increases in the incomes of rich individuals: a 10 percent increase in an individual's income adds more to average income the richer that person is. One suggestion was to replace growth with a poverty-weighted index that measured the growth of the incomes of the poorest 20 to 40 percent of the population.

Although development economists remain concerned with the distribution of the gains from growth, the idea that growth is inherently biased against the poor is not supported by recent empirical work. For example, a study by Dollar and Kraay (2002) finds that on average the incomes of the poorest 20 percent of the population grow at the same rate as average income. Similarly, in a cross-country analysis of income inequality, Li, Squire, and Zou (1998) find that inequality is highly stable within countries over the postwar period. Prominent exceptions include rising inequality in the United States and falling inequality in several fast-growing East Asian economies. Although these results do not guarantee that the poor always benefit from growth, they undermine the presumption that growth is systematically biased against the poor.

The final dimension of economic development is sustainability (see, e.g., Goldin and Winters 1995). The UN's Brundtland Commission (1987) defined sustainable development as development that "meets the needs of the present generation without compromising the ability of future generations to meet their own needs." Viewed in terms of sustainability, income growth rates can be misleading measure of development, since consuming natural resources simultaneously increases income and reduces a country's stock of natural wealth. Correctly measuring sustainable development requires adjusting income levels to account for the depletion of natural resources and degradation of

environmental quality. This has led to the development of “green” national accounting, in which the national saving rate is adjusted for resource depletion. Adjusting income levels for the negative impact of pollution is more difficult, since the value of environmental quality varies widely across individuals, societies, and time.

The relationship between economic growth and environmental quality is not clear cut. Economic growth clearly increases the pressure on natural resources and systems. The challenges to sustainability include the consumption of nonrenewable resources such as oil and coal reserves, loss of biodiversity, depletion of ocean fisheries, deforestation and desertification, and reductions in air and water quality, all of which reduce either the productivity or consumption of future generations. But rising income levels also increase a society’s willingness to pay for environmental quality, its ability to mobilize political pressure, and the technologies and resources it has available to reduce or reverse environmental damage. Together these forces results in complex relationships between environmental quality and average income levels. For example, as income levels rise, access to clean water increases, carbon dioxide emissions worsen, and the output of industrial pollutants such as sulfur dioxide rises and then falls.

Human Development

If income matters for development, it is because it measures the ability of individuals to satisfy their needs and create personally fulfilling lives. In brief, a higher income is at best a means to the end of greater development. Recognizing this led to several efforts to measure the “ends” directly, resulting in attempts to quantify numerous dimensions of consumption including consumption of food, medical care, housing, and energy. Many of

these measures were subsequently criticized as being based on Western norms and consumption patterns—larger houses counted but larger weddings did not—reducing their usefulness as general measures of development. A more generally accepted approach is the Human Development Index, which has been published annually since 1990 as part of the UN's Human Development Report.

The Human Development Index, or HDI, gives equal weight to three components measuring income, health, and educational attainment. For each component, a country's outcomes are graded on a scale from 0 to 1, where the ends of the spectrum are defined by the lowest and highest observation for other countries. Health is measured by life expectancy at birth. Life expectancy is highly sensitive to infant and child mortality rates. Since these depend on widespread access to nutrition and health care, life expectancy is highly sensitive to economic and social inequality. Education is a fundamental determinant of economic and social mobility, and as such plays an important role in determining the range of choices available to an individual. The educational index is calculated as two-thirds adult literacy and one-third current enrollment rates, making it sensitive to both educational inequality and future educational attainment. The HDI includes a measure of income to proxy for all aspects of human development not captured by health and education. The HDI index of income levels uses the natural log of per capita income. This choice places greater weight on income increases among poor nations, since it implies that proportional increases in income are measured equally: the increase from $1,000 to $2,000 is equal to that from $10,000 to $20,000.

Although it is still clearly limited, the HDI is the most widely known and commonly used alternative to per capita income as a measure of development. To see

how the HDI differs from per capita income as a measure of development, it is useful to compare country rankings using the HDI and per capita income levels. Using data from the 2007 Human Development Report, we find that major oil exporters and countries with significant AIDS crises do worse when ranked according to human development, results that probably reflect the HDI's sensitivity to inequality and life expectancy. Similarly, the United States ranks lower using HDI than it does using per capita income, an outcome that reflects inequalities in access to education and health care relative to other wealthy countries. Alternatively, current and formerly socialist countries, such as Cuba, Venezuela, and the former Soviet countries, tend to rank higher using the HDI, reflecting both their commitment to the provision of education and health care and their relative inability to generate high incomes for their citizens. These differences aside, differences in per capita income explain more than 88 percent of the variation in the HDI, suggesting that income is the most important determinant of both health and educational outcomes. With higher incomes societies can build schools and hospitals and hire the teachers and doctors to staff them.

Social Development

Social development refers to development of society as a whole. A number of dimensions of social development have been measured and subjected to analysis, often as part of the UN's Human Development Report, including political development, human rights, human security, and gender equality. Here we consider two aspects of social development: political development and gender equality. It should be noted that in attempting to define social development, it is impossible to escape from subjective value

judgments that vary widely across individuals and cultures. In particular, the measures presented here have their roots in Western Enlightenment thinking that is both secular and individualistic. To the degree that other cultures emphasize competing values based on family or community or religious devotion, these measures may be inappropriate.

We measure political development along two dimensions, the extension of democratic political rights and freedom from corruption. Democratic political rights may be viewed both as an end in themselves and as the means to achieve other development goals. For example, democratic political rights and the civil rights that sustain them, such as the freedoms of speech, association, and the press, are central to self-expression and to full participation in the social life of a country. They may also play an instrumental role in reducing income inequality and raising incomes by securing access to health care and education. As Sen (1981) famously pointed out, despite instances of widespread crop failure, there has never been a famine in a democratic country: letting too many people starve is bad for reelection. Though it is difficult to measure democracy objectively, there appears to be a strong relationship between average income and democratic political rights. It is hard to disentangle cause from effect, and there appear to be important links in both directions. For example, democracies tend to have higher levels of education but also higher taxes, with conflicting implications for economic growth, and the demand for political rights may increase as rising incomes satisfy more basic physical needs (see, e.g., Barro 1996).

While democracy focuses on how political leaders are chosen, governance refers to their behavior once in office. Democracy may be seen as a means to the end of good governance. An important aspect of governance is corruption, defined as using public

office for private gain. Measures of corruption are constructed using survey data and tend to be highly correlated with one another and with other measures of governance such as the quality of bureaucracy. Freedom from corruption tends to rise with per capita income, though less strongly than the Human Development Index. For example, using data from 2007, the correlation between the natural log of per capita income and Transparency International's Corruption Perceptions Index is 0.63. As with democracy, causality appears to run both ways. Clean government results in the better use of tax revenues and provision of public goods, and higher incomes increase the demand for good government and the ability to supply it.

Gender equality involves equal access for women and girls to economic opportunities and resources and full participation in the social and political spheres of life. Gender equality was first included in the Human Development Report in 1995. The Human Development Report now reports a Gender-related Development Index (GDI), which measures the inequality of health, education, and income outcomes by gender using the same indexes as the Human Development Index. Gender equality is both a fundamental measure of women's rights and opportunities and an important contributor in securing other development objectives. As with political development, there are complex relationships between gender equality and political and economic development. Expanding women's political participation may reduce corruption and increase the provision of education and health care, while women's economic participation both raises incomes directly and has important impacts on the well-being of future generations.

See also aid, international; economic development; evolution of development thinking; poverty, global

Further Reading

Barro, Robert J. 1996. "Democracy and Growth." *Journal of Economic Growth* 1: 1–27. Presents evidence on the relationship between economic and political development.

Dollar, David, and Aart Kraay. 2002. "Growth Is Good for the Poor." *Journal of Economic Growth* 7 (3): 195–225. Presents evidence on the growth of incomes among the poor.

Goldin, Ian, and Alan Winters, eds. 1995. *The Economics of Sustainable Development.* Cambridge: Cambridge University Press. An excellent introduction to sustainable development.

Li, Hongyi, Lyn Squire, and Heng-fu Zou. 1998. "Explaining International and Intertemporal Variations in Income Inequality." *Economic Journal* 108: 26–43. Argues that for most countries income inequality has been relatively constant in the post–World War II era.

Sen, Amartya. 1981. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford: Oxford University Press. A foundational analysis of famine in which Sen argues for the importance of democratic political rights.

———. 1999. *Development as Freedom*. New York: Knopf. An extended essay on development by the foremost thinker in this area.

Streeten, Paul. 1981. *First Things First: Meeting Basic Needs in Developing Countries.* Oxford: Oxford University Press. Argues that development should be defined in terms of poverty reduction rather than growth.

United Nations. 1987. “Report of the World Commission on Environment and Development.” General Assembly Resolution 42/187. New York: UN. Known as the Brundtland Commission report, this paper did much to popularize the idea of sustainable development.

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