

**IN THIS CHAPTER YOU WILL LEARN:**

- How the World Bank distinguishes between industrial advanced countries (high-income nations) and developing countries (middle-income and low-income nations).
- Some of the obstacles to economic development.
- About the vicious cycle of poverty that afflicts low-income nations.
- The role of government in promoting economic development within low-income nations.
- How industrial nations attempt to aid low-income countries.



## The Economics of Developing Countries

It is difficult for those of us in the United States, where per capita GDP in 2005 was about \$42,000, to grasp the fact that about 2.7 billion people, or nearly half the world population, live on \$2 or less a day. And about 1.1 billion live on less than \$1 a day. Hunger, squalor, and disease are the norm in many nations of the world.

In this bonus Web chapter we identify the developing countries, discuss their characteristics, and explore the obstacles that have impeded their growth. We also examine the appropriate roles of the private sector and government in economic development. Finally, we look at policies that might help developing countries increase their growth rates.

## The Rich and the Poor

Just as there is considerable income inequality among families within a nation, so too is there great income inequality among the family of nations. According to the United Nations, the richest 20 percent of the world's population receives more than 80 percent of the world's income; the poorest 20 percent receives less than 2 percent. The poorest 60 percent receives less than 6 percent of the world's income.

### Classifications

The World Bank classifies countries into high-income, medium-income, and low-income countries on the basis of national income per capita, as shown in Figure 16W.1. The *high-income nations*, shown in gold, are known as the **industrially advanced countries (IACs)**; they include the United States, Japan, Canada, Australia, New Zealand, and most of the nations of western Europe. In general, these nations have well-developed market economies based on large stocks of capital goods, advanced production technologies, and well-educated workers. In 2004 these economies had a per capita income of \$32,040.

The remaining nations of the world are called **developing countries (DVCs)**. They have wide variations of income per capita and are mainly located in Africa, Asia, and Latin America. The DVCs are a diverse group that can be subdivided into two groups:

- The *middle-income nations*, shown in green in Figure 16W.1, include such countries as Brazil, Iran, Poland, Russia, South Africa, and Thailand. Per capita output of these middle-income nations ranged from \$826 to \$10,065 in 2004 and averaged \$2190.
- The *low-income nations*, shown in orange, had a per capita income of \$825 or less in 2004 and averaged only \$510 of income per person. India, Indonesia, and the sub-Saharan nations of Africa dominate this group. These DVCs have relatively low levels of industrialization. In general, literacy rates are low, unemployment is high, population growth is rapid, and exports consist largely of agricultural produce (such as cocoa, bananas, sugar, raw cotton) and raw materials (such as copper, iron ore, natural rubber). Capital equipment is minimal, production technologies are simple, and labor productivity is very low. About 37 percent of the world's population lives in these low-income DVCs, all of which suffer widespread poverty.

### Comparisons

Several comparisons will bring the differences in world income into sharper focus:

- In 2004 U.S. GDP was nearly \$12 trillion; the combined GDPs of the DVCs in that year came to only \$5.5 trillion.
- The United States, with only 5 percent of the world's population, produces 31 percent of the world's output.
- Per capita GDP of the United States is 207 times greater than per capita GDP in Sierra Leone, one of the world's poorest nations.
- The annual sales of the world's largest corporations exceed the GDPs of many of the DVCs. Wal-Mart's annual world revenues are greater than the GDPs of all but 19 nations.

## Growth, Decline, and Income Gaps

Two other points relating to the nations shown in Figure 16W.1 should be noted. First, the various nations have demonstrated considerable differences in their ability to improve circumstances over time. On the one hand, DVCs such as China, Malaysia, Chile, and Thailand achieved high annual growth rates in their GDPs in recent decades. Consequently, their real output per capita increased several fold. Several former DVCs, such as Singapore, Greece, and Hong Kong (now part of China), have achieved IAC status. In contrast, a number of DVCs in sub-Saharan Africa have recently been experiencing declining per capita GDPs.

Second, the absolute income gap between rich and poor nations has been widening. Suppose the per capita incomes of the advanced and developing countries were growing at about 2 percent per year. Because the income base in the advanced countries is initially much higher, the absolute income gap grows. If per capita income is \$400 a year in a DVC, a 2 percent growth rate means an \$8 increase in income. Where per capita income is \$20,000 per year in an IAC, the same 2 percent growth rate translates into a \$400 increase in income. Thus the absolute income gap will have increased from \$19,600 ( $= \$20,000 - \$400$ ) to \$19,992 ( $= \$20,400 - \$408$ ). The DVCs must grow faster than the IACs for the gap to be narrowed. (**Key Question 3**)

## The Human Realities of Poverty

Development economist Michael Todaro points out that mere statistics conceal the human implications of the extreme poverty in the low-income DVCs:

Let us examine a typical "extended" family in rural Asia. The Asian household is likely to comprise ten or more people, including parents, five to seven children, two grandparents,



**TABLE 16W.1** Selected Socioeconomic Indicators of Development

Country	(1) Per Capita Income, 2004	(2) Life Expectancy at Birth, 2003	(3) Under-5 Mortality Rate per 1000, 2003	(4) Adult Illiteracy Rate, Percent, 2004	(5) Personal Computers per 1000, 2003	(6) Per Capita Energy Consumption, 2002*
United States	\$41,400	77 years	8	1	658.9	7943
Japan	37,180	82	5	1	382.2	4058
Brazil	3090	69	35	12	74.8	1093
Mauritania	420	51	107	49	10.8	103
China	1290	71	37	9	27.6	960
India	620	63	87	39	7.2	513
Bangladesh	440	62	69	59	7.8	155
Ethiopia	110	42	169	58	2.2	297
Mozambique	250	41	147	54	4.5	436

\*Kilograms of oil equivalent.

Source: *World Development Indicators, 2005*; *World Development Report, 2006*.

and some aunts and uncles. They have a combined annual income, both in money and in “kind” (i.e., they consume a share of the food they grow), of \$250 to \$300. Together they live in a poorly constructed one-room house as tenant farmers on a large agricultural estate owned by an absentee landlord who lives in the nearby city. The father, mother, uncle, and the older children must work all day on the land. None of the adults can read or write; of the five school-age children, only one attends school regularly; and he cannot expect to proceed beyond three or four years of primary education. There is only one meal a day; it rarely changes and it is rarely sufficient to alleviate the childrens’ constant hunger pains. The house has no electricity, sanitation, or fresh water supply. There is much sickness, but qualified doctors and medical practitioners are far away in the cities attending to the needs of wealthier families. The work is hard, the sun is hot and aspirations for a better life are constantly being snuffed out. In this part of the world the only relief from the daily struggle for physical survival lies in the spiritual traditions of the people.<sup>1</sup>

Table 16W.1 contrasts various socioeconomic indicators for selected DVCs with those for the United States and Japan. These data confirm the major points stressed in the quotation from Todaro.

## Obstacles to Economic Development

The paths to economic development are essentially the same for developing countries as for the industrially advanced economies:

- The DVCs must use their existing supplies of resources more efficiently. This means that they must eliminate unemployment and underemployment and also combine labor and capital resources in a way that will achieve lowest-cost production. They must also direct their scarce resources so that they will achieve allocative efficiency.
- The DVCs must expand their available supplies of resources. By achieving greater supplies of raw materials, capital equipment, and productive labor, and by advancing its technological knowledge, a DVC can push its production possibilities curve outward.

All DVCs are aware of these two paths to economic development. Why, then, have some of them traveled those paths while others have lagged far behind? The difference lies in the physical, human, and socioeconomic environments of the various nations.

## Natural Resources

No simple generalization is possible as to the role of natural resources in the economic development of DVCs because the distribution of natural resources among them is so uneven. Some DVCs have valuable deposits of bauxite, tin, copper, tungsten, nitrates, and petroleum and have been able to use their natural resource endowments to achieve rapid growth. The Organization of Petroleum Exporting Countries (OPEC) is a standard example. In other instances, natural resources are owned or controlled by the multinational corporations of industrially advanced countries, with the economic benefits from these resources largely diverted abroad. Furthermore, world markets for many of the farm products and raw materials that the DVCs export are subject to large price fluctuations that contribute to instability in their economies.

<sup>1</sup>Michael P. Todaro, *Economic Development in the Third World*, 7th ed. (New York: Addison Wesley Longman, 2000), p. 4.

Other DVCs lack mineral deposits, have little arable land, and have few sources of power. Moreover, most of the poor countries are situated in Central and South America, Africa, the Indian subcontinent, and southeast Asia, where tropical climates prevail. The heat and humidity hinder productive labor; human, crop, and livestock diseases are widespread; and weed and insect infestations plague agriculture.

A weak resource base can be a serious obstacle to growth. Real capital can be accumulated and the quality of the labor force improved through education and training. But it is not as easy to augment the natural resource base. It may be unrealistic for many of the DVCs to envision an economic destiny comparable with that of, say, the United States or Canada. But we must be careful in generalizing: Japan, for example, has achieved a high level of living despite a limited natural resource base. It simply imports the large quantities of natural resources that it needs to produce goods for consumption at home and export abroad.

### Human Resources

Three statements describe many of the poorest DVCs with respect to human resources:

- They are overpopulated.
- Unemployment and underemployment are widespread.
- Labor productivity is low.

**Overpopulation** Many of the DVCs with the most meager natural and capital resources have the largest populations to support. Table 16W.2 shows the high population densities and population growth rates of a few selected nations compared with those of the United States and of the world.

**TABLE 16W.2** Population Statistics, Selected Countries

Country	Population per Square Mile, 2004	Annual Rate of Population Increase, 2000–2004
United States	83	1.0%
Pakistan	529	2.4
Bangladesh	2734	1.7
Venezuela	73	1.8
India	928	1.5
China	361	0.7
Kenya	150	1.9
Philippines	749	2.0
Yemen	98	3.0
<b>World</b>	<b>126</b>	<b>1.2%</b>

Sources: *Statistical Abstract of the United States, 2006*; *World Development Report, 2006*.

Most important in the long run is the contrast in population growth rates. The DVCs are currently experiencing a 1.3 percent annual increase in population compared with a .7 percent annual rate for IACs. Since such a large percentage of the world's current population already lives in DVCs, this percentage difference in population growth rates is highly significant: During the next 15 years, 9 out of every 10 people added to the world population will be born in developing nations. This fact is dramatically reflected in the population realities and projections shown in Figure 16W.2.

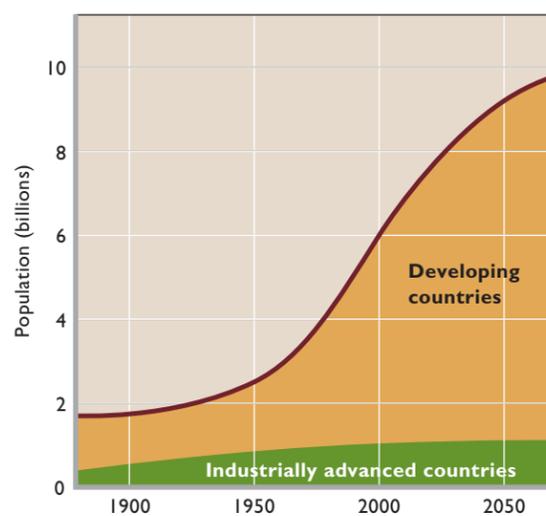
Population statistics help explain why the per capita income gap between the DVCs and the IACs has widened. In some of the poorest DVCs, rapid population growth actually strains the food supply so severely that per capita food consumption falls to or below the biological subsistence level. In the worst instances, only malnutrition and disease, and the high death rate they cause, keep incomes near subsistence.

It would seem at first glance that, since

$$\text{Standard of living} = \frac{\text{consumer goods (food) production}}{\text{population}}$$

the standard of living could be raised by boosting the production of consumer goods such as food. But the problem is more complex, because any increase in the output of consumer goods that initially raises the standard of living may eventually induce a population increase. This increase,

**FIGURE 16W.2** Population growth in developing countries and advanced industrial countries, 1900–2050. The majority of the world's population lives in the developing nations, and those nations will account for most of the rapid increase in population over the next half-century.



Source: Population Reference Bureau, [www.prb.org/](http://www.prb.org/).

if sufficiently large, will dissipate the improvement in living standards, and subsistence living levels will again prevail.

Why might population growth in DVCs accompany increases in food production? First, the nation's death rate will decline. That decline is the result of (1) a higher level of per capita food consumption and (2) the basic medical and sanitation programs that accompany the initial phases of economic development.

Second, the birthrate will remain high or may rise, particularly as medical and sanitation programs cut infant mortality. The cliché that “the rich get richer and the poor get children” is uncomfortably accurate for many of the poorest DVCs. An increase in the per capita standard of living may lead to a population upsurge that will cease only when the standard of living has again been reduced to the level of bare subsistence.

In addition to the fact that rapid population growth may convert an expanding GDP into a stagnant or slow-growing GDP per capita, there are four other reasons why population expansion is often an obstacle to development:

- **Saving and investment** Large families reduce the capacity of households to save, thereby restricting the economy's ability to accumulate capital.
- **Productivity** As population grows, more investment is required to maintain the amount of real capital per person. If investment fails to keep pace, each worker will have fewer tools and equipment, and that will reduce worker productivity (output per worker). Declining productivity implies stagnating or declining per capita incomes.
- **Resource overuse** Because most developing countries are heavily dependent on agriculture, rapid population growth may result in the overuse of limited natural resources, such as land. The much-publicized African famines are partly the result of overgrazing and overplanting of land caused by the pressing need to feed a growing population.
- **Urban problems** Rapid population growth in the cities of the DVCs, accompanied by unprecedented inflows of rural migrants, generates massive urban problems. Rapid population growth aggravates problems such as substandard housing, poor public services, congestion, pollution, and crime. The resolution or lessening of these difficulties necessitates a diversion of resources from growth-oriented uses.

Most authorities advocate birth control as the most effective means for breaking out of the population dilemma. And breakthroughs in contraceptive technology in recent decades have made this solution increasingly relevant. But obstacles to population control are great. Low literacy rates make it difficult to disseminate information about

contraceptive devices. In peasant agriculture, large families are a major source of labor. Adults may regard having many children as a kind of informal social security system: The more children, the greater the probability of the parents' having a relative to care for them in old age. Finally, many nations that stand to gain the most through birth control are often the least willing, for religious reasons, to embrace contraception programs. For example, population growth in Latin America (which has a high proportion of Catholics) is among the most rapid in the world.

China, which has about one-fifth of the world's population, began its harsh “one-child” program in 1980. The government advocates late marriages and one child per family. Couples having more than one child are fined or lose various social benefits. Even though the rate of population growth has diminished under this program, China's population continues to expand. Between 1990 and 2003 it increased by 153 million people. India, the world's second most populous nation, had a 215 million, or 25 percent, population increase in the 1990–2003 period. With a total population of about 1 billion, India has 20 percent of the world's population but less than 2.5 percent of the world's landmass.

**Qualifications** We need to qualify our focus on population growth as a major cause of low incomes, however. As with natural resources, the relationship between population and economic growth is less clear than one might expect. High population density and rapid population growth do not necessarily mean poverty. China and India have immense populations and are poor, but Japan, Singapore, and Hong Kong are densely populated and are wealthy.

Also, the population growth rate for the DVCs as a group has declined significantly in recent decades. Between 1990 and 2003, their annual population growth rate was about 1.5 percent; for 2003–2015, it is projected to fall to 1.2 percent (compared to .3 percent in the IACs).

Finally, not everyone agrees that reducing population growth is the key to increasing per capita GDP in the developing countries. The **demographic transition view** holds that rising income transforms the population dynamics of a nation by reducing birthrates. In this view, large populations are a consequence of poverty, not a cause. The task is to increase income; declining birth rates will then follow.

This view observes there are both marginal benefits and marginal costs of having another child. In DVCs the marginal benefits are relatively large because the extra child becomes an extra worker who can help support the family. Extra children can provide financial support and security for parents in their old age, so people in poor countries have high birthrates. But in wealthy IACs the

marginal cost of having another child is relatively high. Care of children may require that one of the parents sacrifice high earnings or that the parents purchase expensive child care. Also, children require extended and expensive education for the highly skilled jobs characteristic of the IAC economies. Finally, the wealth of the IACs results in “social safety nets” (such as retirement and disability benefits) that protect adults from the insecurity associated with old age and the inability to work. According to this view, people in the IACs recognize that high birthrates are not in the family’s short-term or long-term interest. So many of them choose to have fewer children.

Note the differences in causation between the traditional view and the demographic transition view. The traditional view is that reduced birthrates must come first and then higher per capita income will follow. Lower birthrates *cause* the per capita income growth. The demographic transition view says that higher incomes must first be achieved and then lower rates of population growth will follow. Higher incomes *cause* slower population growth. (Key Question 5)

### Unemployment and Underemployment

Employment-related data for many DVCs are either non-existent or highly unreliable. But observation suggests that unemployment is high. There is also significant **underemployment**, which means that a large number of people are employed fewer hours per week than they want, work at jobs unrelated to their training, or spend much of the time on their jobs unproductively.

Many economists contend that unemployment may be as high as 15 to 20 percent in the rapidly growing urban areas of the DVCs. There has been substantial migration in most developing countries from rural to urban areas, motivated by the expectation of finding jobs with higher wage rates than are available in agricultural and other rural employment. But this huge migration to the cities reduces a migrant’s chance of obtaining a job. In many cases, migration to the cities has greatly exceeded the growth of urban job opportunities, resulting in very high urban unemployment rates. Thus, rapid rural-urban migration has given rise to urban unemployment rates that are two or three times as great as rural rates.

Underemployment is widespread and characteristic of most DVCs. In many of the poorer DVCs, rural agricultural labor is so abundant relative to capital and natural resources that a significant percentage of the labor contributes little or nothing to agricultural output. Similarly, many DVC workers are self-employed as proprietors of small shops, in handicrafts, or as street vendors. A lack of demand means that small shop owners or vendors spend

their idle time in the shop or on the street. While they are not unemployed, they are clearly underemployed.

**Low Labor Productivity** Labor productivity tends to be low in DVCs. As we will see, developing nations have found it difficult to invest in physical capital. As a result, their workers are poorly equipped with machinery and tools and therefore are relatively unproductive. Remember that rapid population growth tends to reduce the amount of physical capital available per worker, and that reduction erodes labor productivity and decreases real per capita incomes.

Moreover, most poor countries have not been able to invest adequately in their human capital (see Table 16W.1, columns 3 and 4); consequently, expenditures on health and education have been meager. Low levels of literacy, malnutrition, lack of proper medical care, and insufficient educational facilities all contribute to populations that are ill equipped for industrialization and economic expansion. Attitudes may also play a role: In countries where hard work is associated with slavery and inferiority, many people try to avoid it. Also, by denying educational and work opportunities to women, many of the poorest DVCs forgo vast amounts of productive human capital.

Particularly vital is the absence of a vigorous entrepreneurial class willing to bear risks, accumulate capital, and provide the organizational requisites essential to economic growth. Closely related is the lack of labor trained to handle the routine supervisory functions basic to any program of development. Ironically, the higher-education systems of some DVCs emphasize the humanities and offer fewer courses in business, engineering, and the sciences. Some DVCs are characterized by an authoritarian view of human relations, sometimes fostered by repressive governments, that creates an environment hostile to thinking independently, taking initiatives, and assuming economic risks. Authoritarianism discourages experimentation and change, which are the essence of entrepreneurship.

While migration from the DVCs has modestly offset rapid population growth, it has also deprived some DVCs of highly productive workers. Often the best-trained and most highly motivated workers, such as physicians, engineers, teachers, and nurses, leave the DVCs to better their circumstances in the IACs. This so-called **brain drain** contributes to the deterioration in the overall skill level and productivity of the labor force.

### Capital Accumulation

The accumulation of capital goods is an important focal point of economic development. All DVCs have a relative dearth of capital goods such as factories, machinery and

equipment, and public utilities. Better-equipped labor forces would greatly enhance productivity and would help boost per capita output. There is a close relationship between output per worker (labor productivity) and real income per worker. A nation must produce more goods and services per worker in order to enjoy more goods and services per worker as income. One way of increasing labor productivity is to provide each worker with more tools and equipment.

Increasing the stock of capital goods is crucial, because the possibility of augmenting the supply of arable land is slight. An alternative is to supply the available agricultural workforce with more and better capital equipment. And, once initiated, the process of capital accumulation may be cumulative. If capital accumulation increases output faster than the growth in population, a margin of saving may arise that permits further capital formation. In a sense, capital accumulation feeds on itself.

Let's first consider the possibility that developing nations will manage to accumulate capital domestically. Then we will consider the possibility that foreign funds will flow into developing nations to support capital expansion.

**Domestic Capital Formation** A developing nation, like any other nation, accumulates capital through saving and investing. A nation must save (refrain from consumption) to free some of its resources from the production of consumer goods. Investment spending must then absorb those released resources in the production of capital goods. But impediments to saving and investing are much greater in a low-income nation than they are in an advanced economy.

**Savings Potential** Consider first the savings side of the picture. The situation here is mixed and varies greatly between countries. Some of the very poor countries, such as Chad, Ghana, Ethiopia, Madagascar, Sierra Leone, and Uganda, have negative saving or save only 0 to 6 percent of their GDPs. The people are simply too poor to save a significant portion of their incomes. Interestingly, however, other developing countries save as large a percentage of their domestic outputs as do advanced industrial countries. In 2003 India and China saved 22 and 47 percent of their domestic outputs, respectively, compared to 26 percent for Japan, 22 percent for Germany, and 14 percent for the United States. The problem is that the domestic outputs of the DVCs are so low that even when saving rates are comparable to those of advanced nations, the total volume of saving is not large.

**Capital Flight** Some of the developing countries have suffered **capital flight**, the transfer of private DVC savings to accounts held in the IACs. (In this usage, "capital" is simply "money," "money capital," or "financial capital.") Many wealthy citizens of DVCs have used their savings to invest in the more economically advanced nations, enabling them to avoid the high investment risks at home, such as loss of savings or real capital from government expropriation, abrupt changes in taxation, potential hyperinflation, or high volatility of exchange rates. If a DVC's political climate is unsettled, savers may shift their funds overseas to a "safe haven" in fear that a new government might confiscate their wealth. Rapid or skyrocketing inflation in a DVC would have similar detrimental effects. The transfer of savings overseas may also be a means of evading high domestic taxes on interest income or capital gains. Finally, money capital may flow to the IACs to achieve higher interest rates or a greater variety of investment opportunities.

Whatever the motivation, the amount of capital flight from some DVCs is significant and offsets much of the IACs' lending and granting of other financial aid to the developing nations.

**Investment Obstacles** There are as many obstacles on the investment side of capital formation in DVCs as on the saving side. Those obstacles include a lack of investors and a lack of incentives to invest.

In some developing nations, the major obstacle to investment is the lack of entrepreneurs who are willing to assume the risks associated with investment. This is a special case of the human capital limitations of the labor force mentioned above.

But the incentive to invest may be weak even in the presence of substantial savings and a large number of willing entrepreneurs. Several factors may combine in a DVC to reduce investment incentives, including political instability, high rates of inflation, and lack of economies of scale. Similarly, very low incomes in a DVC result in a lack of buying power and thus weak demand for all but agricultural goods. This factor is crucial, because the chances of competing successfully with mature industries in the international market are slim. Then, too, lack of trained administrative personnel may be a factor in retarding investment.

Finally, the **infrastructure** (stock of public capital goods) in many DVCs is insufficient to enable private firms to achieve adequate returns on their investments. Poor roads and bridges, inadequate railways, little gas and electricity production, poor communications, unsatisfactory housing, and inadequate educational and public health facilities create an inhospitable environment for

private investment. A substantial portion of any new private investment would have to be used to create the infrastructure needed by all firms. Rarely can firms provide an investment in infrastructure themselves and still earn a positive return on their overall investment.

For all these reasons, investment incentives in many DVCs are lacking. It is significant that four-fifths of the overseas investments of multinational firms go to the IACs and only one-fifth to the DVCs. If the multinationals are reluctant to invest in the DVCs, we can hardly blame local entrepreneurs for being reluctant too.

How then can developing nations build up the infrastructure needed to attract investment? The higher-income DVCs may be able to accomplish this through taxation and public spending. But in the poorest DVCs there is little income to tax. Nevertheless, with leadership and a willingness to cooperate, a poor DVC can accumulate capital by transferring surplus agricultural labor to the improvement of the infrastructure. If each agricultural village allocated its surplus labor to the construction of irrigation canals, wells, schools, sanitary facilities, and roads, significant amounts of capital might be accumulated at no significant sacrifice of consumer goods production. Such investment bypasses the problems inherent in the financial aspects of the capital accumulation process. It does not require that consumers save portions of their money income, nor does it presume the presence of an entrepreneurial class eager to invest. When leadership and cooperative spirit are present, this “in-kind” investment is a promising avenue for accumulation of basic capital goods. (**Key Question 6**)

### Technological Advance

Technological advance and capital formation are frequently part of the same process. Yet there are advantages in discussing technological advance separately.

Given the rudimentary state of technology in the DVCs, they are far from the frontiers of technological advance. But the IACs have accumulated an enormous body of technological knowledge that the developing countries might adopt and apply without expensive research. Crop rotation and contour plowing require no additional capital equipment and would contribute significantly to productivity. By raising grain storage bins a few inches aboveground, a large amount of grain spoilage could be avoided. Although such changes may sound trivial to people of advanced nations, the resulting gains in productivity might mean the difference between subsistence and starvation in some poverty-ridden nations.

The application of either existing or new technological knowledge often requires the use of new and different capital goods. But, within limits, a nation can obtain at

least part of that capital without an increase in the rate of capital formation. If a DVC channels the annual flow of replacement investment from technologically inferior to technologically superior capital equipment, it can increase productivity even with a constant level of investment spending. Actually, it can achieve some advances through **capital-saving technology** rather than **capital-using technology**. A new fertilizer, better adapted to a nation’s topography and climate, might be cheaper than the fertilizer currently being used. A seemingly high-priced metal plow that will last 10 years may be cheaper in the long run than an inexpensive but technologically inferior wooden plow that has to be replaced every year.

To what extent have DVCs adopted and effectively used available IAC technological knowledge? The picture is mixed. There is no doubt that such technological borrowing has been instrumental in the rapid growth of such Pacific Rim countries as Japan, South Korea, Taiwan, and Singapore. Similarly, the OPEC nations have benefited significantly from IAC knowledge of oil exploration, production, and refining. Recently Russia, the nations of eastern Europe, and China have adopted western technology to hasten their conversion to market-based economies.

Still, the transfer of advanced technologies to the poorest DVCs is not an easy matter. In IACs technological advances usually depend on the availability of highly skilled labor and abundant capital. Such advances tend to be capital-using or, to put it another way, labor-saving. Developing economies require technologies appropriate to quite different resource endowments: abundant unskilled labor and very limited quantities of capital goods. Although labor-using and capital-saving technologies are appropriate to DVCs, much of the highly advanced technology of advanced nations is inappropriate to them. They must develop their own appropriate technologies. Moreover, many DVCs have “traditional economies” and are not highly receptive to change. That is particularly true of peasant agriculture, which dominates the economies of most of the poorer DVCs. Since technological change that fails may well mean hunger and malnutrition, there is a strong tendency to retain traditional production techniques.

### Sociocultural and Institutional Factors

Economic considerations alone do not explain why an economy does or does not grow. Substantial sociocultural and institutional readjustments are usually an integral part of the growth process. Economic development means not only changes in a nation’s physical environment (new

transportation and communications facilities, new schools, new housing, new plants and equipment) but also changes in the way people think, behave, and associate with one another. Emancipation from custom and tradition is frequently a prerequisite of economic development. A critical but intangible ingredient in that development is the **will to develop**. Economic growth may hinge on what individuals within DVCs want for themselves and their children. Do they want more material abundance? If so, are they willing to make the necessary changes in their institutions and old ways of doing things?

**Sociocultural Obstacles** Sociocultural impediments to growth are numerous and varied. Some of the very low income countries have failed to achieve the preconditions for a national economic entity. Tribal and ethnic allegiances take precedence over national allegiance. Each tribe confines its economic activity to the tribal unit, eliminating any possibility for production-increasing specialization and trade. The desperate economic circumstances in Somalia, Sudan, Liberia, Zaire, Rwanda, and other African nations are due in no small measure to martial and political conflicts among rival groups.

In countries with a formal or informal caste system, labor is allocated to occupations on the basis of status or tradition rather than on the basis of skill or merit. The result is a misallocation of human resources.

Religious beliefs and observances may seriously restrict the length of the workday and divert to ceremonial uses resources that might have been used for investment. Some religious and philosophical beliefs are dominated by the fatalistic view that the universe is capricious, the idea that there is little or no correlation between an individual's activities and endeavors and the outcomes or experiences that person encounters. The **capricious universe view** leads to a fatalistic attitude. If "providence" rather than hard work, saving, and investing is the cause of one's lot in life, why save, work hard, and invest? Why engage in family planning? Why innovate?

Other attitudes and cultural factors may impede economic activity and growth: emphasis on the performance of duties rather than on individual initiative; focus on the group rather than on individual achievement; and the belief in reincarnation, which reduces the importance of one's current life.

**Institutional Obstacles** Political corruption and bribery are common in many DVCs. School systems and public service agencies are often ineptly administered, and their functioning is frequently impaired by petty politics. Tax systems are frequently arbitrary, unjust,

cumbersome, and detrimental to incentives to work and invest. Political decisions are often motivated by a desire to enhance the nation's international prestige rather than to foster development.

Because of the predominance of farming in DVCs, the problem of achieving an optimal institutional environment in agriculture is a vital consideration in any growth program. Specifically, the institutional problem of **land reform** demands attention in many DVCs. But the reform that is needed may vary tremendously from nation to nation. In some DVCs the problem is excessive concentration of land ownership in the hands of a few wealthy families. This situation is demoralizing for tenants, weakens their incentive to produce, and typically does not promote capital improvements. At the other extreme is the situation in which each family owns and farms a piece of land far too small for the use of modern agricultural technology. An important complication to the problem of land reform is that political considerations sometimes push reform in the direction of farms that are too small to achieve economies of scale. For many nations, land reform is the most acute institutional problem to be resolved in initiating economic development.

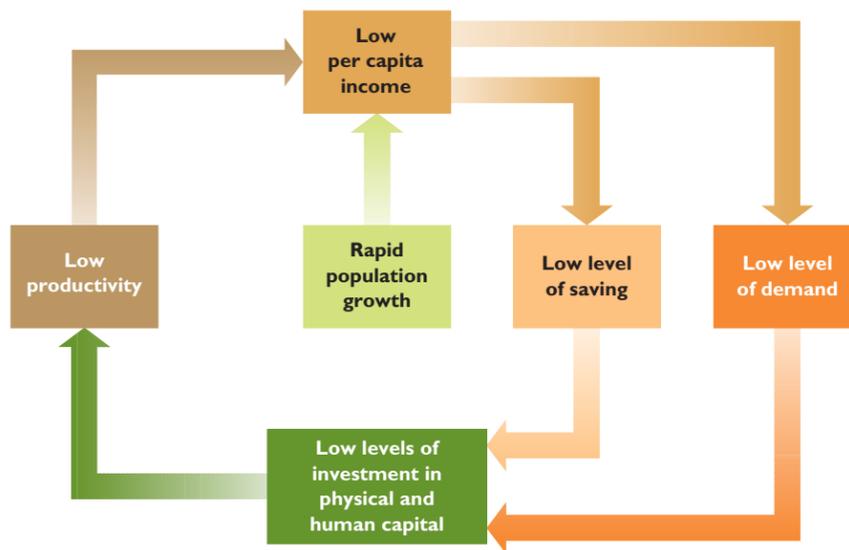
Examples: Land reform in South Korea weakened the political control of the landed aristocracy and opened the way for the emergence of strong commercial and industrial middle classes, all to the benefit of the country's economic development. In contrast, the prolonged dominance of the landed aristocracy in the Philippines may have stifled economic development in that nation.

#### QUICK REVIEW 16W.1

- About 37 percent of the world's population lives in the low-income DVCs.
- Scarce natural resources and inhospitable climates restrict economic growth in many DVCs.
- Most of the poorest DVCs are characterized by overpopulation, high unemployment rates, underemployment, and low labor productivity.
- Low saving rates, capital flight, weak infrastructures, and lack of investors impair capital accumulation in many DVCs.
- Sociocultural and institutional factors are often serious impediments to economic growth in DVCs.

## The Vicious Circle

Many of the characteristics of DVCs just described are both causes and consequences of their poverty. These countries are caught in a **vicious circle of poverty**. They



**FIGURE 16W.3 The vicious circle of poverty.** Low per capita incomes make it difficult for poor nations to save and invest, a condition that perpetuates low productivity and low incomes. Furthermore, rapid population growth may quickly absorb increases in per capita real income and thereby destroy the possibility of breaking out of the poverty circle.

stay poor because they are poor! Consider Figure 16W.3. Common to most DVCs is low per capita income. A family that is poor has little ability or incentive to save. Furthermore, low incomes mean low levels of product demand. Thus, there are few available resources, on the one hand, and no strong incentives, on the other hand, for investment in physical or human capital. Consequently, labor productivity is low. And since output per person is real income per person, it follows that per capita income is low.

Many economists think that the key to breaking out of this vicious circle is to increase the rate of capital accumulation, to achieve a level of investment of, say, 10 percent of the national income. But Figure 16W.3 reminds us that rapid population growth may partially or entirely undo the potentially beneficial effects of a higher rate of capital accumulation. Suppose that initially a DVC is realizing no growth in its real GDP but somehow manages to increase saving and investment to 10 percent of its GDP. As a result, real GDP begins to grow at, say, 2.5 percent per year. With a stable population, real GDP per capita will also grow at 2.5 percent per year. If that growth persists, the standard of living will double in about 28 years. But what if population also grows at the rate of 2.5 percent per year, as it does in parts of the Middle East, northern Africa, and sub-Saharan Africa? Then real income per person will remain unchanged and the vicious circle will persist.

But if population can be kept constant or limited to some growth rate significantly below 2.5 percent, real income per person will rise. Then the possibility arises of

further enlargement of the flows of saving and investment, continuing advances in productivity, and the continued growth of per capita real income. If a process of self-sustaining expansion of income, saving, investment, and productivity can be achieved, the self-perpetuating vicious circle of poverty can be transformed into a self-regenerating, beneficent circle of economic progress.



**16W.1**  
Economic development

The challenge is to make effective the policies and strategies that will accomplish that transition. (**Key Question 12**)

## Role of Government

Economists do not agree on the appropriate role of government in fostering DVC growth.

### A Positive Role

One view is that, at least during initial stages of development, government should play a major role because of the types of obstacles facing DVCs.

**Law and Order** Some of the poorest countries of the world are plagued by banditry and intertribal warfare that divert attention and resources from the task of development. A strong, stable national government is needed to establish domestic law and order and to achieve peace and unity. Research demonstrates that political instability (as measured by the number of revolutions and coups per decade) and slow growth go hand in hand.

**Lack of Entrepreneurship** The lack of a sizable and vigorous entrepreneurial class, ready and willing to accumulate capital and initiate production, indicates that in some DVCs private enterprise is not capable of spearheading the growth process. Government may have to take the lead, at least at first.

**Infrastructure** Many obstacles to economic growth are related to an inadequate infrastructure. Sanitation and basic medical programs, education, irrigation and soil conservation projects, and construction of highways and transportation-communication facilities are all essentially nonmarketable goods and services that yield widespread spillover benefits. Government is the only institution that is in a position to provide these public goods and services in required quantities.

**Forced Saving and Investment** Government action may also be required to break through the saving and investment shortfalls that impede capital formation in DVCs.

It is possible that only government fiscal action can force the economy to accumulate capital. There are two alternatives. One is to force the economy to save by raising taxes and then to channel the tax revenues into priority investment projects. However, honestly and efficiently administering the tax system and achieving a high degree of compliance with tax laws may present grave problems.

The other alternative is to force the economy to save through inflation. Government can finance capital accumulation by creating and spending new money or by selling bonds to banks and spending the proceeds. The resulting inflation is the equivalent of an arbitrary tax on the economy.

Forcing the economy to save through inflation, however, raises serious arguments. First, inflation often diverts investment away from productive facilities to such targets as luxury housing, precious metals and jewels, or foreign securities, which provide a better hedge against rising prices. Also, significant inflation may erode voluntary private saving because would-be savers are reluctant to accumulate depreciating money or securities payable in money of declining value. Often, too, inflation induces capital flight. Finally, inflation may boost the nation's imports and retard its flow of exports, thereby creating balance-of-payments difficulties.

**Social-Institutional Problems** Government is in the best position to deal with the social-institutional obstacles to growth. Controlling population growth and promoting land reform are problems that call for the broad approach that only government can provide. And

government is in a position to nurture the will to develop, to change a philosophy of "Heaven and faith will determine the course of events" to one of "God helps those who help themselves."

### Public Sector Problems

Still, serious problems and disadvantages may arise with a government-directed development program. If entrepreneurial talent is lacking in the private sector, are quality leaders likely to surface in the ranks of government? Is there not a real danger that government bureaucracy will impede, not stimulate, social and economic change? And what of the tendency of some political leaders to favor spectacular "showpiece" projects at the expense of less showy but more productive programs? Might not political objectives take precedence over the economic goals of a governmentally directed development program?

Development experts are less enthusiastic about the role of government in the growth process than they were 30 years ago. Unfortunately, government misadministration and **corruption** are common in many DVCs, and government officials sometimes line their own pockets with foreign-aid funds. Moreover, political leaders often confer monopoly privileges on relatives, friends, and political supporters and grant exclusive rights to relatives or friends to produce, import, or export certain products. Such monopoly privileges lead to higher domestic prices and diminish the DVC's ability to compete in world markets.

Similarly, managers of state-owned enterprises are often appointed on the basis of cronyism rather than competence. Many DVC governments, particularly in Africa, have created "marketing boards" as the sole purchaser of agricultural products from local farmers. The boards buy farm products at artificially low prices and sell them at higher world prices; the "profit" ends up in the pockets of government officials. In recent years the perception of government has shifted from that of catalyst and promoter of growth to that of a potential impediment to development. According to a recent ranking of 90 nations based on perceived corruption, the 40 nations at the bottom of the list (most corrupt) were DVCs. Global Perspective 16W.1 shows the 3 least corrupt nations, the United States, and the 12 most corrupt nations according to the index.

### The Role of Advanced Nations

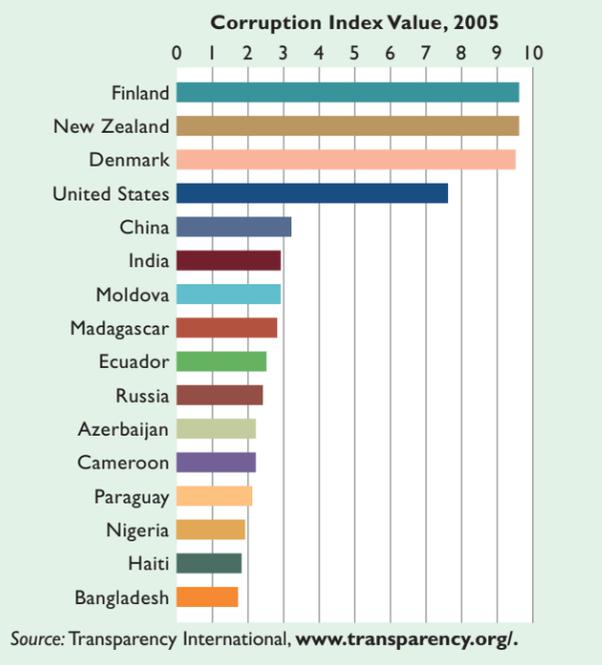
How can the IACs help developing countries in their pursuit of economic growth? To what degree have IACs provided assistance?



**GLOBAL PERSPECTIVE 16W.1**

**The Corruption Perception Index, Selected Nations, 2005\***

The corruption perception index relates to degree of corruption existing among public officials and politicians as seen by businesspeople, risk analysts, and the general public. An index value of 10 is highly clean and 0 is highly corrupt.



Generally, IACs can aid developing nations through (1) expanding trade with the DVCs, (2) providing foreign aid in the form of government grants and loans, and (3) providing transfers of technology and flows of private capital.

**Expanding Trade**

Some authorities maintain that the simplest and most effective way for the United States and other industrially advanced nations to aid developing nations is to lower international trade barriers. Such action would enable DVCs to elevate their national incomes through increased trade.

Although there is some truth in this view, lowering trade barriers is not a panacea. Some poor nations do need only large foreign markets for their raw materials in order to achieve growth. But the problem for many poor nations is not to obtain markets in which to sell existing products or relatively abundant raw materials but to get the capital

and technical assistance they need to produce something worthy for export.

Moreover, close trade ties with advanced nations entail certain disadvantages. Dependence on the IACs' demand for imports would leave the DVCs vulnerable to temporary declines in the IACs' production. By reducing the demand for exports, recessions in the IACs might have disastrous consequences for the prices of raw materials from and the export earnings of the DVCs. For example, during the recession in the IACs in the early 1990s, the world price of zinc fell from \$.82 per pound to \$.46 per pound, and the world price of tin fell from \$5.20 per pound to \$3.50 per pound. Because mineral exports are a major source of DVC income, stability and growth in IACs are important to economic progress in the developing nations.

**Foreign Aid: Public Loans and Grants**

Foreign capital—either public or private—can play a crucial role in breaking an emerging country's circle of poverty by supplementing its saving and investment. As previously noted, many DVCs lack the infrastructure needed to attract either domestic or foreign private capital. The infusion of foreign aid that strengthens infrastructure could enhance the flow of private capital to the DVCs.

**Direct Aid** The United States and other IACs have assisted DVCs directly through a variety of programs and through participation in international bodies designed to stimulate economic development. Over the past 10 years, U.S. loans and grants to the DVCs totaled \$10 billion to \$16 billion per year. The U.S. Agency for International Development (USAID) administers most of this aid. Some of it, however, consists of grants of surplus food under the Food for Peace program. Other advanced nations also have substantial foreign aid programs. In 2003 foreign aid from the IACs to the developing nations totaled \$80 billion. This amounted to about one-fourth of 1 percent of the collective GDP of the IACs that year (see Global Perspective 16W.2 for percentages for selected nations).

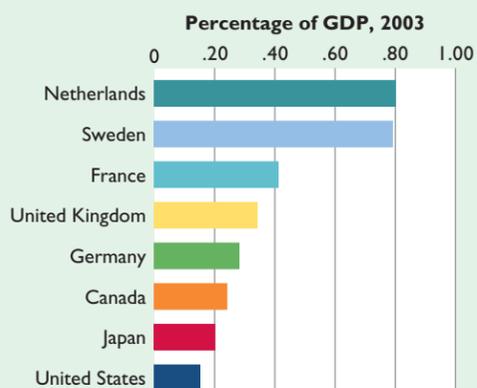
A large portion of foreign aid is distributed on the basis of political and military rather than strictly economic considerations. Israel, Turkey, Egypt, Greece, and Pakistan, for example, are major recipients of U.S. aid. Asian, Latin American, and African nations with much lower standards of living receive less. Nevertheless, some of the world's poorest nations receive large amounts of foreign aid relative to their meager GDPs. Examples (2003 data): Sierra Leone, 39 percent; Eritrea, 34 percent; Nicaragua, 21 percent; and Liberia, 28 percent.



### GLOBAL PERSPECTIVE 16W.2

#### Development Assistance as a Percentage of GDP, Selected Nations

In terms of absolute amounts, the United States is second only to Japan as a leading provider of development assistance to the DVCs. But many other industrialized nations contribute a larger percentage of their GDPs to foreign aid than does the United States.



Source: United Nations, *Human Development Report, 2006*, p. 278 ([www.undp.org/](http://www.undp.org/).)

**The World Bank Group** The United States is a participant in the **World Bank**, whose major objective is helping DVCs achieve economic growth. [The World Bank was established in 1945, along with the International Monetary Fund (IMF).] Supported by about 184 member nations, the World Bank not only lends out of its capital funds but also sells bonds and lends the proceeds and guarantees and insures private loans:

- The World Bank is a “last-resort” lending agency; its loans are limited to economic projects for which private funds are not readily available.
- Many World Bank loans have been for basic development projects—dams, irrigation projects, health and sanitation programs, communications and transportation facilities. Consequently, the Bank has helped finance the infrastructure needed to encourage the flow of private capital.
- The Bank has provided technical assistance to the DVCs by helping them determine what avenues of growth seem appropriate for their economic development.

Affiliates of the World Bank function in areas where the World Bank has proved weak. The *International Finance Corporation (IFC)*, for example, invests in private enterprises

in the DVCs. The *International Development Association (IDA)* makes “soft loans” (which may not be self-liquidating) to the poorest DVCs on more liberal terms than does the World Bank.

**Foreign Harm?** Nevertheless, foreign aid to the DVCs has met with several criticisms.

**Dependency and Incentives** A basic criticism is that foreign aid may promote dependency rather than self-sustaining growth. Critics argue that injections of funds from the IACs encourage the DVCs to ignore the painful economic decisions, the institutional and cultural reforms, and the changes in attitudes toward thrift, industry, hard work, and self-reliance that are needed for economic growth. They say that, after some five decades of foreign aid, the DVCs’ demand for foreign aid has increased rather than decreased. These aid programs should have withered away if they had been successful in promoting sustainable growth.

**Bureaucracy and Centralized Government** IAC aid is given to the governments of the DVCs, not to their residents or businesses. The consequence is that the aid typically generates massive, ineffective government bureaucracies and centralizes government power over the economy. The stagnation and collapse of the Soviet Union and communist countries of eastern Europe is evidence that highly bureaucratized economies are not very conducive to economic growth and development. Furthermore, not only does the bureaucratization of the DVCs divert valuable human resources from the private to the public sector, but it often shifts the nation’s focus from producing more output to bickering over how unearned “income” should be distributed.

**Corruption and Misuse** Critics also allege that foreign aid is being used ineffectively. As we noted previously, corruption is a major problem in many DVCs, and some estimates suggest that from 10 to 20 percent of the aid is diverted to government officials. Also, IAC-based aid consultants and multinational corporations are major beneficiaries of aid programs. Some economists contend that as much as one-fourth of each year’s aid is spent on expert consultants. Furthermore, because IAC corporations manage many of the aid projects, they are major beneficiaries of, and lobbyists for, foreign aid.

**The Ups and Downs of Foreign Aid** Direct foreign aid by IAC governments to developing countries declined substantially in the last half of the 1990s. In 1995 the IACs provided \$68 billion of foreign aid; by 1999 that aid had dropped to \$53 billion. One reason undoubtedly was the

various criticisms of foreign aid. Another reason was the loss of force of the political-military rationale for foreign aid. Nations such as Cuba, Ethiopia, and North Korea, which adhered to communist principles, were cut off from foreign aid from the Soviet Union. And the United States reduced aid to developing nations such as Egypt, Mexico, Thailand, Turkey, and Chile, which tended to support U.S. policies.

But foreign aid has rebounded sharply in recent years, growing from \$53 billion in 1999 to \$80 billion in 2003. This increase resulted largely from a renewed international emphasis on reducing global poverty and expanded efforts by IACs to enlist the cooperation of DVCs in the war on terrorism.

### Flows of Private Capital

The IACs also send substantial amounts of private capital to the DVCs. Among the private investors are corporations, commercial banks, and, more recently, financial investment companies. General Motors or Ford might finance construction of plants in Mexico or Brazil to assemble autos or produce auto parts. JPMorgan Chase or Bank of America might make loans to private firms operating in Argentina or China or directly to the governments of Thailand and Malaysia. And the financial investment companies Fidelity or Putnam might purchase stock of promising Hungarian and Chilean firms as part of their “emerging markets” mutual funds, which then could be purchased by individual investors in the IACs.

The flow of private capital to the DVCs increased briskly in the 1990s, jumping from \$44 billion in 1990 to \$199 billion in 2003. The major reason for the increased flow of private capital is that many DVCs have reformed their economies to promote growth and thus are better credit risks. At the macro level, many DVCs have reduced budget deficits and controlled inflation. At the micro level, some governments have privatized state-owned businesses and deregulated industry. Some DVCs have reduced tariffs and have adjusted unrealistically fixed exchange rates. In general, the DVCs have reduced the economic role of government and increased the role of free markets in their economies. Those reforms have made the DVCs more attractive to foreign lenders.

The makeup of the private capital flow to the DVCs, however, is now different from what it was in prior decades. First, private IAC firms and individuals, rather than commercial banks, are the primary lenders. Second, a greater proportion of the flow now consists of **direct foreign investment** in DVCs, rather than loans to DVC governments. Such direct investment includes the building of new factories in DVCs by multinational firms and the purchase of DVC firms (or parts of them). Whereas DVCs once viewed direct foreign investment as “exploitation,”

many of them now seek out direct foreign investment as a way to expand their capital stock and improve their citizens’ job opportunities and wages. Those wages are often very low by IAC standards but high by DVC standards. Another benefit of direct investment in DVCs is that management skills and technological knowledge often accompany the capital.

Two words of caution: The strong flow of private capital to the DVCs is highly selective. Recently, most of the flow has been directed toward China, Mexico, south-east Asian nations, and eastern European nations. Relatively little IAC capital is flowing toward such extremely impoverished DVCs as those in Africa.

In fact, many impoverished countries face staggering debt burdens from previous government and private loans. Payment of interest and principal on this external debt is diverting expenditures away from maintenance of infrastructure, new infrastructure, education, and private investment.

#### QUICK REVIEW 16W.2

- DVC governments may encourage economic growth by (a) providing law and order, (b) taking the lead in establishing enterprises, (c) improving the infrastructure, (d) forcing higher levels of saving and investing, and (e) resolving social-institutional problems.
- The IACs can assist the DVCs through expanded trade, foreign aid, and flows of private capital.
- Many of the poorest DVCs have large external debts that pose an additional obstacle to economic growth.
- In recent years the flow of foreign aid to DVCs has declined, whereas the flow of private capital (particularly direct investment) has increased.

### Where from Here?

The developing nations face daunting tasks. There simply are no magic methods for achieving quick economic development. Moreover, the developing nations are not homogeneous. Some DVCs are far ahead of others in achieving economic development. Nevertheless, our discussion has directly suggested or implied a set of policies that would promote the growth process in the DVCs. We conclude the chapter by listing and briefly summarizing those policies.

### DVC Policies for Promoting Growth

Economists suggest that developing nations have several ways of fostering their economic growth:

- **Establishing and implementing the rule of law**  
Clearly defined and regularly enforced property rights

### The Roots of Africa's Persistent Famines Lie in Both Natural and Human Causes.

A number of sub-Saharan African nations are periodically threatened by famine. For example, in the early 1990s about 300,000 children under the age of 5 died from famine in Somalia. In 2003 famine threatened the lives of an estimated 10 million people in several southern Africa nations (Lesotho, Malawi, Mozambique, Swaziland, Zambia, and Zimbabwe). Although most African countries were self-sufficient in food at the time they became independent nations, they are now heavily dependent on imported foodstuffs for survival.

The immediate cause of famine often is drought. For example, in Kenya drought and crop failures in 1999 and 2000 killed much of the nation's livestock, leaving an estimated 3.5 million people at risk of starvation. But as first pointed out by economist Amartya Sen, the ultimate causes of sub-Saharan Africa's inability to feed itself are rooted in a complex interplay of natural and human conditions. Lack of rainfall, chronic civil strife, rapid population growth, widespread soil erosion, and counterproductive public policies all contribute to Africa's famines.

**Civil Strife** Regional rebellions, prolonged civil wars, and wars between nations have devastated several African nations. Ethiopia, Sudan, and Rwanda, for example, have been plagued by decades of civil strife. As another example, Ethiopia has recently been at war with its neighbor Eritrea. Not only do these conflicts divert precious resources from civilian uses, but they

seriously complicate the ability of wealthy nations to provide famine and developmental aid. Governments frequently divert donated food to the army and deny it to starving civilians. In Somalia, factional feuding destroyed most of the existing schools, factories, and government ministries and reduced the country to anarchy. Armed gangs stole water pumps, tractors, and livestock from farms and looted ports of donated foodstuffs.

**Population Growth** Although substantially slowing from previous growth rates, the population of sub-Saharan Africa is still growing very rapidly. Population is projected to grow by 2 percent annually from 2003 to 2015, compared to .3 percent in the industrially advanced economies. When crops are abundant, the sub-Saharan nations are able to feed their growing population. But when war or drought hits, hunger and malnutrition quickly follow.

**Ecological Degradation** Population growth has also contributed to the ecological degradation of Africa. With population pressures and the increasing need for food, marginal land has been deforested and put into crop production. In many cases trees that have served as a barrier to the encroachment of the desert have been cut down for fuel, allowing the fragile topsoil to be blown away by desert winds. The scarcity of wood that has accompanied deforestation has forced the use of animal dung for fuel, thereby denying its traditional use as fertilizer.

Furthermore, traditional fallow periods have been shortened, resulting in overplanting and overgrazing and a wearing

bolster economic growth by ensuring that individuals receive and retain the fruits of their labor. Since legal protections reduce investment risk, the rule of law encourages direct investments by firms in the IACs. Government itself must live by the law. The presence of corruption in the government sanctions criminality throughout the economic system. Such criminality undermines the growth of output by diverting scarce resources toward activities that "transfer" income away from activities that produce goods and services.

- **Opening economies to international trade** Other things equal, open economies grow as much as 1.2 percentage points per year faster than closed economies.
- **Controlling population growth** Slower population growth converts increases in real output and income

to increases in real per capita output and income. Families with fewer children consume less and save more; they also free up time for women to participate in the labor market.

- **Encouraging foreign direct investment** DVCs that welcome direct foreign investment enjoy greater growth rates than DVCs that view such investment suspiciously and put severe obstacles in its way.
- **Building human capital** Programs that encourage literacy, education, and labor market skills enhance economic growth. In particular, policies that close the education gap between women and men spur economic growth in developing countries. Higher-education loans and grants should contain strong incentives for recipients to remain in the home country (or to return to the home country) after receiving their degrees.

out of the soil. Deforestation and land overuse have reduced the capacity of the land to absorb moisture, diminishing its productivity and its ability to resist drought. All this is complicated by the fact that there are few facilities for crop storage, making it difficult, even when crops are good, to accumulate a surplus for future lean years. A large percentage of domestic farm output in some parts of Africa is lost to rats, insects, and spoilage.

**Public Policies** Ill-advised public policies have contributed to Africa's famines.

First, many African governments generally have neglected investment in agriculture in favor of industrial development and military strength. It is estimated that African governments on the average spend four times as much on armaments as they do on agriculture.

Second, many African governments have adopted a policy of setting the prices of agricultural commodities at low levels to provide cheap food for growing urban populations.

That policy has diminished the incentives of farmers to increase production. While foreign aid has helped ease the effects of Africa's food-population problems, most experts reject aid as a long-term solution. Experience suggests that aid in the form of food can provide only temporary relief and may undermine the



achievement of long-run local self-sufficiency. Foreign food aid, it is contended, treats symptoms, not causes.

Most dramatically, Zimbabwe's seizure of thousands of white-owned commercial farms for redistribution to black settlers collapsed the food supply. Along with severe drought, the policy threatened half the Zimbabwe population with severe malnutrition in 2003.

**External Debt** All this is made more complex by the fact that the sub-Saharan nations are burdened with large external debts. The World Bank reports that the aggregate external

debt of these nations was \$84 billion in 1980 and grew to \$218 billion by 2003. As a condition of further aid, these nations have had to invoke austerity programs that have contributed to declines in their per capita incomes. One tragic consequence is that many of these nations have cut back on social service programs such as health care for children. For that reason, in 2000 the major industrial nations and the World Bank initiated a pro-

gram to forgive \$50 billion of total debt owed by some of these nations, on the condition that they end warfare and use the savings in interest and principal to ease the plight of their populations.

- ***Making peace with neighbors*** Countries at war or in fear of war with neighboring nations divert scarce resources to armaments, rather than to private capital or public infrastructure. Sustained peace among neighboring nations eventually leads to economic cooperation and integration, broadened markets, and stronger growth.
- ***Establishing independent central banks*** High rates of inflation are not conducive to economic investment and growth. DVCs can help keep inflation in check by establishing independent central banks to maintain proper control over their money supplies. Studies indicate that DVCs that control inflation enjoy higher growth rates than those that do not.
- ***Establishing realistic exchange-rate policies*** Exchange rates that are fixed at unrealistic levels invite balance-of-payments problems and speculative trading in currencies. Often, such trading forces a nation into an abrupt reevaluation of its currency, sending shock waves throughout its economy. More flexible exchange rates enable more gradual adjustments and thus less susceptibility to major currency shocks and the domestic disruption they cause.
- ***Privatizing state industries*** Many DVCs would benefit by converting state enterprises into private firms. State enterprises often are inefficient, more concerned with appeasing labor unions than with introducing modern technology and delivering goods and services at minimum per-unit cost. Moreover, state enterprises are poor "incubators" for the development of profit-focused, entrepreneurial persons who leave the firm to set up their own businesses.

## IAC Policies for Fostering DVC Growth

What can the IACs do to improve living conditions and promote growth in the developing nations? Here there is more disagreement among the experts. Economists offer a variety of suggestions, some of which we have already mentioned:

- **Directing foreign aid to the poorest DVCs** Much of the foreign aid emanating from the IACs is strongly influenced by political and military consideration rather than on the basis of their economic needs or degree of destitution. Only one-fourth of foreign aid goes to the 10 countries in which 70 percent of the world's poorest people live. The most affluent 40 percent of the DVC population receives over twice as much aid as the poorest 40 percent. Many economists argue that the IACs should shift foreign aid away from the middle-income DVCs and toward the poorest DVCs.
- **Reducing tariffs, import quotas, and farm subsidies** Trade barriers instituted by the IACs are often highest for labor-intensive manufactured goods such as textiles, clothing, footwear, and processed agricultural products. These are precisely the sorts of products for which the DVCs have a comparative advantage. Also, many IACs' tariffs rise as the degree of product processing increases; for example, tariffs on chocolates are higher than those on cocoa. This practice discourages the DVCs from developing processing industries of their own. Moreover, large agricultural subsidies in the IACs encourage excessive production of food and fiber in the IACs. The overproduction flows into world markets,

where it depresses agricultural prices. DVCs, which typically do not subsidize farmers, therefore face artificially low prices for their farm exports. The IACs could greatly help DVCs by reducing farm subsidies along with tariffs.

- **Providing debt forgiveness to the poorest DVCs** The current debt of the poorest DVCs is so large that it serves as a severe roadblock to DVC growth. Many economists support debt forgiveness for the poorest DVCs on loans provided by IAC governments. And, in fact, the process of debt forgiveness has begun. In 1999 the G8 nations agreed to \$29 billion of debt relief for highly indebted poor nations over 5 years. The World Bank has also agreed to an additional \$50 billion of debt relief.
- **Admitting in temporary workers and discouraging brain drains** Economists recommend that the IACs help the DVCs by accepting more temporary workers from the DVCs. Temporary migration provides an outlet for surplus DVC labor. Moreover, migrant remittances to families in the home country serve as a sorely needed source of income. Further, IACs should discourage brain drains from the DVCs, in which the brightest and best-educated workers in the DVCs are recruited to the IACs. As you might imagine, such proposals command more support in the DVCs than in the IACs.
- **Discouraging arms sales to the DVCs** Finally, the IACs should discourage the sale of military equipment to the DVCs. Such purchases by the DVCs divert public expenditures from infrastructure and education.

## Summary

1. The majority of the world's nations are developing countries (low- and middle-income nations). While some DVCs have been realizing rapid growth rates in recent years, others have experienced little or no growth.
2. Scarcities of natural resources make it more challenging for a nation to develop.
3. The large and rapidly growing populations in many DVCs contribute to low per capita incomes. Increases in per capita incomes frequently induce greater population growth, often reducing per capita incomes to near-subsistence levels. The demographic transition view, however, suggests that rising living standards must precede declining birthrates.
4. Most DVCs suffer from unemployment and underemployment. Labor productivity is low because of insufficient investment in physical and human capital.
5. In many DVCs, formidable obstacles impede both saving and investment. In some of the poorest DVCs, the savings potential is very low, and many savers transfer their funds to the IACs rather than invest them domestically. The lack of a vigorous entrepreneurial class and the weakness of investment incentives also impede capital accumulation.
6. Appropriate social and institutional changes and, in particular, the presence of "the will to develop" are essential ingredients in economic development.

7. The vicious circle of poverty brings together many of the obstacles to growth, supporting the view that poor countries stay poor because of their poverty. Low incomes inhibit saving and the accumulation of physical and human capital, making it difficult to increase productivity and incomes. Overly rapid population growth, however, may offset promising attempts to break the vicious circle.
8. The nature of the obstacles to growth—the absence of an entrepreneurial class, the dearth of infrastructure, the saving-investment dilemma, and the presence of social-institutional obstacles to growth—suggests that government should play a major role in initiating growth. However, the corruption and maladministration that are common to the public sectors of many DVCs suggest that government may not be very effective in instigating growth.
9. Advanced nations can encourage development in the DVCs by reducing IAC trade barriers and by providing both public and private capital. Critics of foreign aid, however, say that it
  - (a) creates DVC dependency, (b) contributes to the growth of bureaucracies and centralized economic control, and (c) is rendered ineffective by corruption and mismanagement.
10. In recent years the IACs have reduced foreign aid to the DVCs but have increased direct investment and other private capital flows to the DVCs.
11. Economists suggest that DVCs could make further progress by establishing and enforcing the rule of law, opening their economies to international trade, controlling population growth, encouraging direct foreign investment, building human capital, maintaining peace with neighbors, establishing independent central banks, setting realistic exchange rates, and privatizing state industries. The IACs can help in this process by directing foreign aid to the neediest nations, reducing tariffs and import quotas, providing debt forgiveness to the poorest DVCs, allowing more low-skilled immigration from the DVCs, and discouraging arms sales to the DVCs.

## Terms and Concepts

industrially advanced countries (IACs)	infrastructure	land reform
developing countries (DVCs)	capital-saving technology	vicious circle of poverty
demographic transition view	capital-using technology	corruption
underemployment	will to develop	World Bank
brain drain	capricious universe view	direct foreign investment
capital flight		

## Study Questions

1. What are the characteristics of a developing nation? List the two basic avenues of economic growth available to such a nation. State and explain the obstacles that DVCs face in breaking the poverty barrier. Use the “vicious circle of poverty” concept to outline steps a DVC might take to initiate economic development.
2. Explain how the absolute per capita income gap between rich and poor nations might increase, even though per capita income (or output) is growing faster in DVCs than in IACs.
3. **KEY QUESTION** Assume a DVC and an IAC presently have real per capita outputs of \$500 and \$5000, respectively. If both nations have a 3 percent increase in their real per capita outputs, by how much will the per capita output gap change?
4. Discuss and evaluate:
  - a. The path to economic development has been blazed by American capitalism. It is up to the DVCs to follow that trail.
  - b. The problem with the DVCs is that income is too equally distributed. Economic inequality promotes saving, and saving is a prerequisite of investment. Therefore, greater inequality in the income distribution of the DVCs would be a spur to capital accumulation and growth.
5. **KEY QUESTION** Contrast the demographic transition view of population growth with the traditional view that slower population growth is a prerequisite for rising living standards in the DVCs.
6. **KEY QUESTION** Because real capital is supposed to earn a higher return where it is scarce, how do you explain the fact that most international investment flows to the IACs (where capital is relatively abundant) rather than to the DVCs (where capital is very scarce)?

7. Do you think that the nature of the problems the DVCs face requires government-directed as opposed to a private-enterprise-directed development process? Explain why or why not.
8. What were the trends in government-provided foreign aid versus private capital flows to the DVCs in the 1990s? Why do you think those trends occurred?
9. Do you favor debt forgiveness to all the DVCs, just the poorest ones, or none at all? What incentive problem might debt relief create? Would you be willing to pay \$20 a year more in personal income taxes for debt forgiveness? How about \$200 dollars? How about \$2000 dollars?
10. What types of products do the DVCs typically export? How do those exports relate to the law of comparative advantage? How do tariffs by IACs reduce the standard of living of DVCs?
11. Do you think that IACs such as the United States should open their doors wider to the immigration of low-skilled DVC workers in order to help the DVCs develop? Do you think that it is appropriate for students from DVC nations to stay in IAC nations to work and build careers?
12. **KEY QUESTION** Use Figure 16W.2 (changing the box labels as necessary) to explain rapid economic growth in a country such as South Korea or Chile. What factors other than those contained in the figure might contribute to that growth?
13. **LAST WORD** Explain how civil wars, population growth, and public policy decisions have contributed to periodic famines in Africa.

## Web-Based Questions

1. **THE WORLD BANK GROUP—MILLENNIUM DEVELOPMENT GOALS** Go to the World Bank Web site, [www.worldbank.org](http://www.worldbank.org), and identify the five major agencies that make up the World Bank Group. What are the specifics of the Bank Group's millennium development goals? What are the estimated costs of achieving these goals?
2. **AID-DEPENDENCY RATIOS—WHICH NATIONS ARE THE MOST DEPENDENT?** Use the search function at the World

Bank Web site, [www.worldbank.org](http://www.worldbank.org), to find the most recent data on "aid-dependency ratios." Create a top 10 list of nations that have the highest ratios of aid received as a percentage of GNI (gross national income)? What continent dominates your list?