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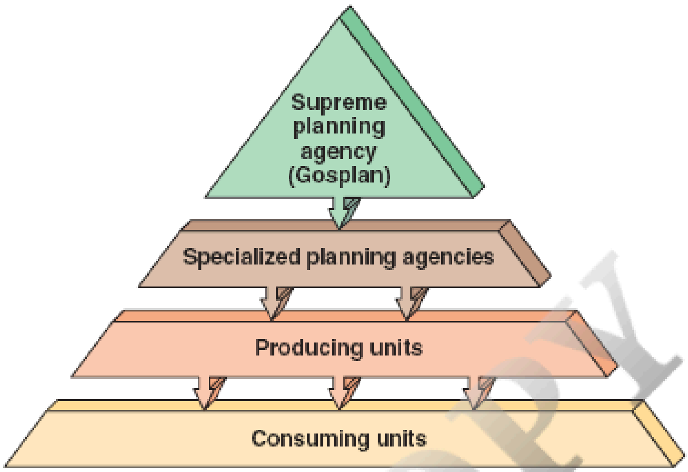
16-1c. The Command Economy

In a **command economy**, a dictator or group of central planners makes economic decisions for society. In this system, the What, How, and For Whom questions are answered by a dictator or planners with central authority. The former Soviet Union and Cuba and North Korea today are examples of nations with command economies using national economic plans implemented through powerful government committees. Politically selected committees decide on everything, including the number, color, size, quality, and price of autos, brooms, sweaters, and tanks. The state owns the factors of production and dictates answers to the three basic economic questions. The authorities might decide to produce modern weapons instead of schools, or they might decide to devote resources to building huge monuments like the pyramids, built by the rulers of ancient Egypt to honor their dead kings and queens.

In the former Soviet economy, for example, the three basic economic questions were answered by a central planning agency called the *Gosplan*. Following the policies of the political authority (the Politburo), the Gosplan set production quotas and prices for farms, factories, mines, housing construction, medical care, and other producing units. What should the cows be fed? If it is hay, how much land can be used to grow it? How much milk should the cows give? How many people will be dairy farmers? What wages should a dairy farmer earn? Should milk be given to everyone, to a few, or to people chosen by the leaders? If there was a shortage of goods in the shops, then goods would be rationed through queuing. The Gosplan tried to make all these decisions. Today, in Russia and the other former Soviet republics, the Gosplan is a distant memory of the discarded Soviet command system.

The pyramid shown in Exhibit 1 represents the command economy. At the top of the pyramid is a supremely powerful group of central planners, such as the former Soviet Gosplan. That agency established production targets and prices for goods and services.

Exhibit 1 The Command Economy Pyramid



Details

The principal feature of a command economy is the central planning board at the top, which transmits economic decisions down to the various producing and consuming units below. This process begins with an overall plan from a supreme planning board, such as the former Soviet Gosplan. The Gosplan established production targets and was the ultimate authority over a layer of specialized planning agencies that authorized capital expansion, raw material purchases, prices, wages, and all other production decisions for individual producing units. Finally, the factories, farms, mines, and other producers distributed the specified output to consumers according to the approved master plan.

Then, the Gosplan transmitted this information to a second layer of specialized state planning agencies. One of these specialized government bureaucracies purchased raw materials, another agency established fashion trends, another set prices, and another government bureaucracy made decisions based on employment and wages.

Production objectives were transmitted from the upper authority layers to the individual producing units, represented by the third layer of the pyramid in Exhibit 1. These producers supplied goods and services to the consumers as commanded by the central authorities. The bottom portion of the pyramid illustrates the distribution, according to the master plan, of output to consuming illustrates the distribution, according to the master plan, of output to consuming units of individuals and households.

The same graphical analysis applies to centrally planned rental prices for apartments. The central planners in the former Soviet Union set rents below the equilibrium rental prices for apartments. As the model predicts, low rents resulted in a shortage of housing. Meanwhile, the planners promised that improvements in housing would come in time.

On the other hand, if central planners set prices too high, then surpluses result, and over-production occurs. Rarely would central planners get lucky and set prices at equilibrium. Even if they did get so lucky, future changes in demand and supply would create shortages or surpluses.

Take Note

When central planners set prices for goods and service below equilibrium, it creates shortages, which mean long lines, empty shelves, and black markets. * Prices set above equilibrium create surpluses and over-production.

16-1e. The Market Economy and the Ideas of Adam Smith

In a market economy, neither customs nor a single person or group of central planners answers the three basic economic questions facing society. The **market economy** is an economic system that answers the What, How, and For Whom questions using prices determined by the interaction of the forces of supply and demand. One of the first people to explain the power of a market economy was the Scottish economist Adam Smith. In 1776, the same year that the American colonies declared their political independence, Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* presented the blueprint for employing markets to improve economic performance. Smith spent over ten years observing the real world and writing about how nations could best improve their material well-being. He concluded that the answer was to use free markets because this mechanism provides the freedom and incentive for markets because this mechanism provides the freedom and incentive for everyone to follow their own *selfinterest*.

Adam Smith is the *father of modern economics*. He intended to write a book that would influence popular opinion, and unlike many famous works, his book was an immediate success. The basic philosophy of his book is “the best government is the least government.” This belief is known as *laissez-faire*, a French expression meaning “allow to act.” As Smith stated, the role of the government should be limited to providing national defense, providing education, maintaining infrastructure, enforcing contracts, and little else. Smith also advocated free trade among nations and rejected the idea that nations should impose trade barriers.

During Smith’s lifetime, European nations such as England, France, and Spain intervened to control economic activities. In *The Wealth of Nations*, he argued that economic freedoms are “natural rights” necessary for the dignity of humankind. He believed that free competition among people who follow their self-interest would best benefit society because markets free of government interference produce the greatest quantity, quality, and variety of goods and services possible at the lowest possible prices. As noted earlier, Smith was an advocate of free international trade and asked the question implied in the full title of his book: Why are some nations richer than others? He explained that the source of any nation’s wealth is not really the amount of gold or silver it owns. This was an idea popular during Smith’s time called *mercantilism* . Instead, he
405 argued that it is the ability of people to produce products and trade in free markets that creates a nation’s wealth.

The importance of markets is that they harness the power of self-interest to answer the What, How, and For Whom questions. Without central planning, markets coordinate the actions of millions of consumers and producers. Smith said that the market economy seemed to be controlled by an *invisible hand*. The **invisible hand** is a phrase that expresses the belief that the best interests of a society are served when individual consumers and producers compete to achieve their own private interests. Guided by an invisible hand, producers must compete with one another to win consumers' money. The *profit motive* in a competitive marketplace provides profits as a reward for efficient producers, while losses punish inefficient producers. Smith saw profit as the necessary driving force in an individualistic market system. The profit motive leads the butcher, the baker, and other producers to answer the What, How, and For Whom questions at the lowest prices. Consumers also compete with one another to purchase the best goods at the lowest price. Competition automatically regulates the economy, resulting in a greater quantity, quality, and variety of products at lower prices than a system in which government attempts to accomplish this same outcome in the *public interest*. In Smith's own words:

> Every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By … directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. *

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16-1f. The Market Economy's Strengths and Weaknesses

In a market system, if consumers want Sudoku puzzles, they can buy them because sellers seek to profit from the sale of Sudoku puzzles. No single person or central planning board makes a formal decision to shift resources and tells firms how to produce what many might view as a frivolous product. Because no central body or set of customs interferes, the market system provides a wide variety of the highest quality goods and services that buyers and sellers exchange at the lowest prices.

Take Note

A market economy answers the *What to produce* and *How to produce* questions very effectively.

Those who criticize the market economy point out the market failure problems of lack of competition, externalities, and a lack of public goods, discussed in Chapter 4. These market failures reduce the efficiency of a market economy. There are also some equity concerns with a marker economy. For example, some people point to market prices that may be "unfair." Or, they attack market economies because they result in a distribution of income where some people are very wealthy while others are very poor. In a market economy, output is divided in favor of people who have the money to pay for the limited supply of goods and services. And those who own more resources, or scarcer, more costly resources, will earn more income and can afford to dine on caviar in fine restaurants, while others will wander the streets and beg for food and shelter. Supporters of the market system argue that inequality of income must exist to give people incentives to be productive, and higher income is a just reward for the value of greater contributions to society.

16-1g. The Mixed Economy

In the real world, no nation is a pure traditional, command, or market economy. Even tribes in remote areas employ a few markets in their system. For example, members of a tribe may exchange shells for animal skins. In China, the government allows most businesses and farms to operate in free markets. Although the United States is best described as a market economy, it is also a blend of the other two systems. As mentioned earlier, the Amish operate a well-known traditional economy in our nation. The draft during wartime is an example of a command economy in which the government obtains involuntary labor. In addition, taxes "commanded" from taxpayers fund government programs, such as national defense and Social Security. If the economic systems of most nations do not perfectly fit one of the basic definitions, what term best describes their economies? A more appropriate description is that most countries employ a blend of the basic types of economic systems, broadly called a mixed economy. A **mixed economy** is a system that answers the What, How, and For Whom questions through a mixture of traditional, command, and market systems.

The traditional, command, and market economies can exist in a wide variety of political situations. For instance, the United States and Japan are politically "free" societies in which the market system flourishes. But China uses the market system to a limited degree in spite of its lack of political freedom. Moreover, some of the Western democracies engage in central economic planning. French officials representing government, business, and labor meet annually to discuss economic goals for industry for the next five-year period, but compliance is voluntary. In Japan, a government agency called the *Ministry of Economy, Trade and Industry (METI)* engages in long-term planning. One of the

Economy, Trade and Industry (METI) engages in long-term planning. One of the goals of the METI is to encourage exports so Japan can earn the foreign currencies it needs to pay for oil and other resources it imports.

Am I on Track?

1. Which of the following statements is true about the basic types of economic systems?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. The command economy is an economic system that answers the What, How, and For Whom questions the way they have always been answered.

b. The traditional economy is an economic system that answers the What, How, and For Whom questions by a dictator or central authority.

c. A criticism of a command economy is that central planners may set prices that cause shortages or surpluses, resulting in inefficiency.

d. There are no criticisms of a market economy because it results in the greatest quantity, quality, and variety of goods and services produced at the lowest possible prices.

16-2. The "ISMS"

What type of economic system will a society choose to answer the What, How, and For Whom questions? We could call most economies "mixed," but this would be too imprecise. In the real world, economic systems are labeled with various forms of the popular "isms"—capitalism, socialism, and communism, which are based on the basic types of systems.

16-2b. Capitalism's Strengths and Weaknesses

One of the major strengths of capitalism is its capacity to achieve *economic efficiency* because competition and the profit motive force production to the optimal quantity at the lowest cost. Competition also ensures the highest quality and widest variety of products that consumers can choose from. Another strength of pure capitalism is *economic freedom* because economic power is widely dispersed. Individual consumers, producers, and workers are free to choose among alternatives and to make decisions based on their own self-interest. Economist Milton Friedman makes a related point: Private ownership limits the power of government to deny goods, services, or jobs to its adversaries.

Critics of capitalism cite several shortcomings. First, some markets may not be competitive, denying society the benefits of competition. Second, pure capitalism underproduces external benefit products and overproduces external cost products. You may recall from Chapter 4 that many products are considered external cost products because of the environmental damage they impose. The failure to protect the environment as some market participants pursue their self-interest to maximize their profits too often can result in damage or pollution to the air we breathe and our rivers, lakes, and streams. Recall the graphical model used in Chapter 4 to illustrate the socially unacceptable impact of producers who pollute the environment. Third, private markets can fail to provide an adequate amount of public goods like education, medical care, roads, and national defense. Fourth, capitalism also tends toward a more unequal distribution of income. This growing inequality of income among citizens results for several reasons. Private ownership of capital and the other factors of production can cause these factors to become concentrated in the hands of a few individuals or firms. Also, people do not have equal labor skills, and the marketplace rewards those with greater skills. These inequalities may be perpetuated because the rich can provide better education, legal aid, political platforms, and wealth to their heirs. Finally, some critics believe capitalism inevitably leads to macroeconomic instability that can result in severe recessions or even depressions.

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Take Note

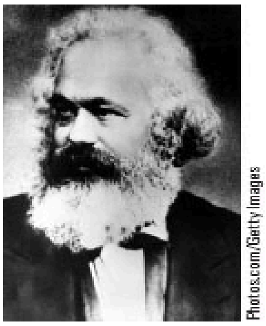
Capitalism's strengths include efficiency and freedom. Its weaknesses include a lack of competition, externalities, a lack of public goods and services, growing income disparities, and macroeconomic instability.

Advocates of socialism believe that the market failures in a capitalist system create so much economic hardship that a country is better off using socialism to organize its production; however, because it is impossible to objectively measure the extent to which these market failures exist, reasonable people often disagree over the degree to which the government should intervene to try to correct for these problems. On the other side of the issue, critics of socialism argue that the government may fail to improve on these market outcomes. Or, worse yet, government intervention may make matters worse. These critics believe that socialism produces poor economic results mostly because some government officials are corrupt, ignorant, or succumb to special interest group political pressure.

Before discussing socialism further, you must realize that socialism is an economic system, and political systems should not be confused with economic systems. Socialist economies may be controlled by any number of political systems ranging from dictatorships to democracies. Generally, socialist economies run by non-democratic governments are referred to as *communist* nations today. On the other hand, *democratic socialism* exists when the government is a freely and fairly elected democracy. The degree of socialism, or government influence over economic affairs, can vary dramatically among nations. And it is difficult to say when a country has become a “socialist” state. Nevertheless, there are elements of socialism in every nation. For example, Great Britain, France, Italy, and the Scandinavian nations of Norway, Sweden, and Denmark all have representative democracies, but many of their major industries (such as railroads and coal mining) are or have been nationalized.

16-2d. The Ideas of Karl Marx

Despite the transition toward more capitalist systems in Russia and Eastern Europe, China, Cuba, and many less-developed countries are still primarily socialist. The theory for socialism and *communism* can be traced to Karl Marx. Marx was a nineteenth-century German philosopher, revolutionary, and economist. Unlike other economists of the time who followed Adam Smith, Marx rejected the concept of a society operating through private interest and profit.



Photos.com/Getty Images

Karl Marx (1818–1883) His criticism of capitalism advanced communism. He wrote *The Communist Manifesto and Das Kapital*.

Karl Marx was born in Germany, the son of a lawyer. In 1841, after receiving a doctorate in philosophy from Berlin University, he turned to journalism and became interested in radical politics. In 1843, Marx married the daughter of a wealthy family and moved to Paris, but his political activities forced him to leave Paris for England. From the age of 31, he lived and wrote his books in London. In London, Marx lived an impoverished life while he and his lifelong friend Friedrich Engels wrote *The Communist Manifesto*, published in 1848. A massive work followed, titled *Das Kapital*, which was published in three volumes between 1867 and 1894. These two works made Karl Marx the most influential economist in the history of socialism. In fact, he devoted his entire life to a revolt against capitalism. As Marx read *The Wealth of Nations*, he saw profits as unjust payments to owners of firms—the capitalists. Marx predicted that the market system would destroy itself because wealthy owners would go too far and exploit workers because unrelenting greed for profits would lead the owners to pay starvation wages. Moreover, the owners would force laborers to work in unsafe conditions, and many would not have a job at all.

Marx believed that private ownership and exploitation would produce a nation driven by a class struggle between a few "haves" and many "have-nots." As he stated in *The Communist Manifesto*, "The history of all existing society is the history of class struggle. Freeman and slave, patrician and plebeian, lord and serf, guildmaster and journeyman, in a word, oppressor and oppressed." In Marx's vision, capitalists were the modern-day oppressors, and the workers were the oppressed proletariat. Someday, Marx predicted, the workers would rise up in a spontaneous bloody revolution against a system benefiting only the owners of capital. Marx believed communism to be the ideal system, which would evolve in stages from capitalism through socialism. **Communism** is a stateless, classless economic system in which all the factors of production are owned by the workers and people share in production according to their needs. This is the highest form of socialism toward which the revolution should strive. Under communism, no private property exists to encourage self-interest. There is no struggle between classes of people, and everyone cooperates. In fact, there is no reason to commit crime, and police, lawyers, and courts are unnecessary. Strangely, Marx surpassed Adam Smith in advocating a system with little central government. Marx believed that those who work hard, or are more skilled, will be public spirited. Any "haves" will give voluntarily to "have-nots." In Marx's own words, people would be motivated by the principle "from each according to his ability, to each according to his need." World peace would evolve as nation after nation accepted cooperation and rejected profits and competition. Under the idealized society of communism, there would be no state. No central authority would be necessary to pursue the interests of the people.

Today, we call the economic systems that existed in the former Soviet Union and Eastern Europe, and still exist in North Korea and other countries, *communist*. However, the definition of *socialism* given in this chapter more accurately describes their real-world economic systems (although it should be emphasized that these socialist economies are run by *non-democratic* governments and that is what generally qualifies a country to be labeled as *communist* today). Actually, no nation has achieved the ideal communist society described by Marx, nor has capitalism self-destructed as he predicted. The 1917 communist revolution in Russia did not fit Marx's theory. At that time, Russia was an underdeveloped country rather than an industrial country filled with greedy capitalists who exploited workers.

16-2e. Characteristics of Socialism

Regardless of a society's political system, a socialist economy has two basic

Regardless of a society's political system, a socialist economy has two basic characteristics: public ownership and centralized decision making.

Public Ownership

Under socialism, the government owns most of the factors of production, including factories, farms, mines, and natural resources. Agriculture in the former Soviet Union illustrates how even this real-world socialist country deviated from total public ownership. In the Soviet Union, there were three rather distinct forms of agriculture: state farms, collective farms, and private plots. In both the state farm and collective farm sectors, central planning authorities determined prices and outputs. In contrast, the government allowed those holding small private plots on peasant farms to operate primarily in free markets that determined price and output levels. Reforms allowed farmers to buy land, tractors, trucks, and other resources from the state and dramatically end the collectivization of agriculture begun under Josef Stalin.

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Centralized Decision Making

Instead of the pursuit of *private interest*, the motivation of pure socialism is the *public interest* of the whole society. For instance, a factory manager cannot decide to raise or lower prices to obtain maximum profits for the factory. Regardless of inventory levels or the opportunity to raise prices, the planners will not permit this action. Instead of exploiting the ups and downs of the market, the goal of the socialist system is to make centralized decisions that protect workers and consumers from decentralized market decisions. Critics argue that the main objective of this centralization is to perpetuate the personal dictatorships of leaders such as Stalin in the former Soviet Union and Kim Jung-un in North Korea.

Before the open market reforms, Soviet planners altered earnings to attract workers into certain occupations and achieve planned goals. For example, if space projects needed more engineers, then the state raised the earnings of engineers until the target number of people entered the engineering profession. As shown earlier in Exhibit 2, central planners in the Soviet Union also manipulated consumer prices. If consumers desired more cars than were available, the authorities increased the price of cars. If people wished to purchase less of an item than was available, planners lowered prices. The problem was that this decision process took time. And while the market awaited its orders from the Soviet planners, excess inventories of some items accumulated, and consumers stood in line for cheap products that never seemed to be available. There was an old Soviet saying, "If you see a line, get in it. Whatever it is, it's scarce, and you will not see it tomorrow."

The Soviet factory system did not adhere completely to the command system. The government rewarded successful managers with bonuses that could be substantial. Better apartments, nice vacations, and medals were incentives for outstanding performance. Under economic reforms, plant managers now make decisions based on profitability instead of centralized controls.

16-2f. Socialism's Strengths and Weaknesses

Proponents of the socialism model argue that this system is superior in achieving an equitable distribution of income. This is because government ownership of capital and other resources prevents a few individuals or groups from acquiring a disproportionate share of the nation's wealth. Also, supporters argue that rapid economic growth is achieved when planners have the power to direct more resources to producing capital goods and fewer resources to producing consumer goods (see Exhibit 5 in Chapter 2).

National goals may seem to be easily formulated and pursued under state directives, but there are problems. For example, proponents of such an economy can claim there is no unemployment because the government assigns all workers a job and allocates resources to complete their production goals. However, economic inefficiency results because the government often uses many workers to perform work requiring only one or two workers. Critics also point out that the absence of the profit motive discourages entrepreneurship and innovation and thus suppresses economic growth.

Socialism is particularly vulnerable to the charge that it ignores the goal of economic freedom and instead creates a privileged class of government bureaucrats who assume the role of "capitalists." Central planners are the key translators of information about consumer preferences and production capabilities flowing to millions of economic units. This complex and cumbersome process is subject to errors and is unresponsive to the wants of the majority of the population. Critics also question whether the distribution of income under socialism is more equitable than under capitalism. In the socialist system, “perks” for government officials, nepotism, and the illegal use of markets create disparities in income.

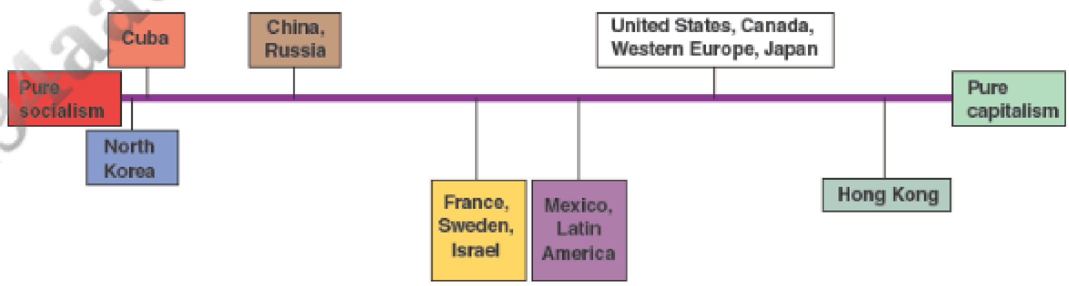
Take Note

Proponents of socialism argue it is superior in achieving an equitable distribution of income and that national goals can be more easily formulated and pursued under state directives. The critics point to inefficiencies and the possibility that those in power may serve their own interests to the detriment of society at large.

16-2g. Comparing Economic Systems

In reality, all nations operate economic systems that blend capitalism and socialism. Exhibit 3 presents a continuum that attempts to place countries between the two extremes of pure socialism on the left and pure capitalism on the right. Economies characterized by a high degree of both private ownership and market allocation are closest to pure capitalism. Hong Kong, Japan, the United States, and Canada fall at the capitalism end of the line. Conversely, economies characterized by much government ownership of resources and central planning are closest to pure socialism. North Korea and Cuba fall close to the pure socialism end of the spectrum, with China and Russia farther away from pure socialism.

Exhibit 3 A Classification of Economic Systems



Details

No nation has an economic system that is pure socialism or pure capitalism. All nations mix government ownership and reliance on markets. North Korea and Cuba are closest to pure socialism, while Hong Kong comes closest to pure capitalism. Other real-world economies are placed between these two extremes on the basis of their use of government ownership versus markets.

Take Note

All real-world economies are a mixture of capitalism and socialism.

Am I on Track?

2. Which of the following statements is true about socialism and capitalism?

SHOW ANSWER

SHOW ANSWER

a. Socialism is characterized by private owner ship of resources and economic activity coordinated through markets.

b. Capitalism is an economic system characterized by private owner ship of resources and centralized decision making.

c. Socialism's strengths include efficiency and freedom.

d. Capitalism is criticized based on a lack of competition, the presence of externalities, a lack of public goods and services, growing income disparities, and macroeconomic instability.

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16-3. Economies in Transition

By the early 1990s, the centrally planned economies in the former Soviet Union and Eastern Europe had collapsed. After more than 70 years in the Soviet Union and over 40 years in Eastern Europe and China, the failed communist economies made a startling switch to embrace capitalism. Faced with severe shortages of food, housing, cars, and other consumer goods, communism could no longer claim better living standards for its citizens. The following is a brief discussion of reforms aimed at introducing market power into the economic systems of Cuba, Russia, and China.

In 2008, a series of changes opened access to cell phones, computers, and DVD players. Cubans are now also allowed to patronize tourist hotels; however, such luxuries are prohibitive for most Cubans. And in 2009, to improve its woeful transportation system, Cuban owners of classic American cars were recruited by the government to apply for taxi licenses and set their own fares subject to price floors. And in 2014, a new law allowed Cubans to buy cars from the government. However, few were able to buy the cars because of heavy taxes designed to redistribute money from the very rich. A joke was that "if you buy a car, the next day the police show up and ask where you got the money."

A Closer Look Applicable Concept: Socialism

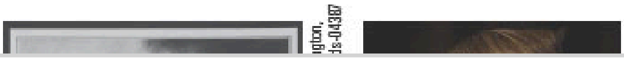
The Unrealistic Path to Communism

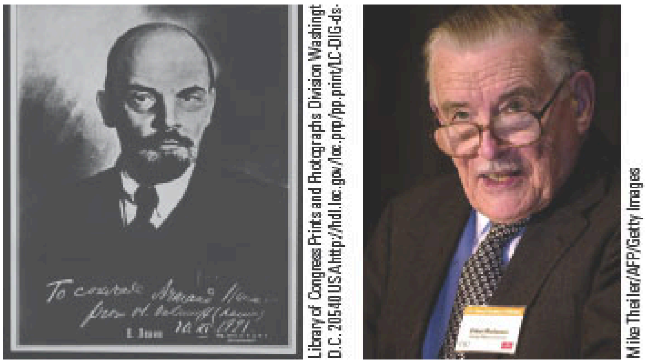
Marx believed that capitalism would create a class of rich business owners and a class of poor workers, who would wage class warfare when workers realized that they were being exploited. Marx also believed that the working class would win this struggle because, as he put it, capitalism will "sow the seeds of its own destruction." In Marx's view, wealth would become increasingly concentrated in a capitalist society, adding to the number of people in the working class, eliminating the middle class, and reducing the ranks of the rich class. As the working class became larger, they would become more successful in the struggle between the classes and eventually win, eliminating the classes in society. In the early 1900s, many European intellectuals felt that the injustices of their day could be traced to capitalism, and they grew impatient for change. The intellectuals wanted to move things along. In Russia, Vladimir Lenin led a revolution that established a socialist government. With its ability to make rapid decisions informed by experts, Lenin believed that socialism would enable Russia to industrialize rapidly, allowing the country to more quickly transition to communism. Lenin also believed his government was a "vanguard state," and necessary only for a short period of time until "the state could wither away" and the communist ideal of a classless society could be attained. In Lenin's vision, the state's rulers had the purest of motives, and they did what they thought was best for the people. *

Lenin's vision of the path to a utopian communist state has come under attack from several different quarters, one being from academia. For example, Nobel Laureate James Buchanan and his co-author Gordon Tullock argued that it was unrealistic to believe that people, who are motivated by self-interest in a market setting, would act benevolently when they made decisions in their capacity as government officials. They believed that human action can best be explained by assuming people are motivated by their own self-interests, regardless of the environment in which they find themselves. *

Another major criticism of Lenin's vision came from a socialist leader who helped lead one of these vanguard governments. Milovan Djilas, who was second in charge of Yugoslavia, a country in the old Soviet bloc, leveled a devastating criticism against the vanguard state. Djilas wrote in a time when the governments of the Soviet Union (Russia) and many of the Eastern European countries were ruled by vanguard states that claimed to be moving their countries toward the ideal stateless communist society. These governments claimed that they had eliminated all classes, so that there were not rich people and poor people. Basically, these governments asserted that they were forcing a classless society on their citizens until the people were willing to form them on their own. Djilas started his critique by agreeing with Marx's argument that in capitalist societies, capital owners form a rich class and workers form a poorer class. However, Djilas did not believe that the vanguard states in Eastern Europe had eliminated classes. Djilas argued these governments just changed who were in the classes. In these countries, the government officials were rich and made up one class, while everyone else was poor and made up the other class. Djilas revealed that government officials used their positions to benefit themselves. They spent resources enhancing their own lifestyles rather than using these resources to help the workers. *

Vladimir Lenin and James Buchanan





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Djilas, Buchanan, and Tullock all point to the pitfalls of trusting the leaders of a socialist government to act for society's benefit rather than their own. Even within a primarily capitalist country like the United States, a similar lesson applies. The founding fathers realized that we were a nation governed by men and not by angels. Consequently, they set up democratic institutions that could produce good results even though our leaders are self-interested rather than angelic. Our democratic government's system of checks and balances is an attempt to create a system that works for how people are really motivated, rather than how we wish they were motivated.

Despite the private enterprise reforms, Cuba remains essentially a communist system. Workers receive free education, housing, health care, low state salaries in pesos, and rations of staples, such as a monthly allowance of rice, beans, and milk. Profits from hotels and shops go directly into the central bank and help finance the government. The state also discourages private enterprises by taxing them heavily on expected earnings rather than on actual sales. In addition, there are highly restrictive regulations. For example, restaurants in Havana are limited to 12 seats and cannot expand regardless of demand. And Cuba has halted new licenses for some types of self-employment, including jewelers, mousetrap makers, and magicians or clowns.

In 2014, the United States announced sweeping changes. Diplomatic relations with Cuba were restored, and an embassy was set up. The United States also loosened restrictions on travel and trade with Cuba. For example, the export of certain goods, such as telecommunications equipment and medicine was permitted. However, these moves stopped short of lifting the economic embargo against Cuba. These Obama-era efforts at normalizing relations between the two countries were largely reversed by the Trump administration. In the summer of 2021, thousands of Cubans protested in the streets voicing their frustration over widespread shortages of food and medicines and surging Covid-19 cases.

16-3b. Russia

In 1991, communist rule ended in Russia. To function efficiently, markets must offer incentives, so workers, the public, and even foreign investors were permitted to buy state property. This meant individuals could own the factors of production and earn profits. Such market incentives were a dagger thrust into the heart of a system previously devoted to rejecting capitalism. A key reform for Russia was to allow supply and demand to set higher prices for basic consumer goods. As shown earlier in Exhibit 2, without central planners, when prices rise to their equilibrium level, the quantity supplied increases and the quantity demanded decreases. At the beginning of 1992, the Russian government removed direct government price controls on most market goods. As the model predicts, average prices rose, leaping 1,735 percent in 1992, and a greater variety of goods started appearing on the shelves. Although workers had to pay more for basic consumer goods, they could at least find goods to buy.

Since 1992, Russia has established an independent central bank and implemented anti-inflationary monetary policies. Cities throughout Russia now have restaurants, megamalls, decent hotels, and streets choked with foreign cars. Russian entrepreneurial spirit and acceptance of it in society is in an embryonic stage, and corruption, including in the legal system, is a frequent way of life. Although Russia is far from a successful market economy, the nation is struggling to achieve an amazing economic transition. Russian privatization plans have been implemented, and steps are continuing to create an economy embracing capitalism. And *Forbes* magazine reports that 117 billionaires reside in Russia.

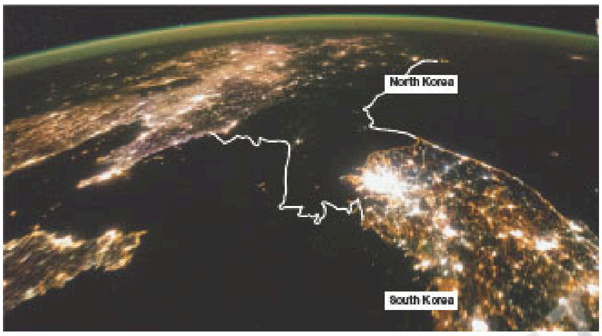
A Closer Look Applicable Concept: Comparative Economic Systems

Shining Light on a Debate

For a long time, economists have argued whether socialism or capitalism is better equipped to produce rapid rates of economic growth and higher standards of living. This issue is not as easy to resolve as you might imagine. It is not enough to say a country like Great Britain is capitalist and rich and another country like Sudan is socialist and poor, so capitalism is a better economic system. Great Britain may be rich for reasons that have nothing to do with its economic system. It may have abundant natural resources, or a hard-working educated workforce. Sudan may be poor for reasons that have nothing to do with its economic system. It may have suffered the hardships of long wars that put investments at such risk that people failed to build new plants and equipment.

The best way to determine which economic system is most effective is to have two identical areas that differ only in their economic systems. This type of controlled experiment is commonplace in a chemistry lab, but it is not an option open to economists. The closest economists can come to the laboratory setting is when a natural experiment occurs (a real world event that approximates the controls available in a laboratory). The Korean experience may approximate such a natural experiment.

After World War II, the Soviet Union and the United States split up Korea. The Soviet Union and China extended their influences into North Korea, and South Korea became aligned with the United States. At the time of the split, these two Koreas were similar. They had people with similar work habits and education. They had similar access to natural resources and roughly the same amount of per-capita income. Actually, in the 1950s, North Korea was a bit richer than South Korea. * Although a natural experiment is never a bit richer than South Korea. Although a natural experiment is never perfect, the story of the two Koreas remains enlightening.



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NASA

In the first few years after the split, it would have been hard to determine which economic system was better at creating wealth. However, 80 years after Korea was divided, the differences are dramatic. South Korea has become a nation as rich as some European countries. North Korea has remained poor. Perhaps the old adage “a picture is worth a 1,000 words” can shed some light on the huge impact an economic system can make to a country’s standard of living. See the satellite picture of the Korean Peninsula at night. Notice that South Korea is lit up with bright lights. The socialist North Korea, on the other hand, is dark. Not enough of its residents can turn on lights for the light to show up in pictures. Lights, which we take for granted in most capitalist countries, are not widely available to North Koreans.

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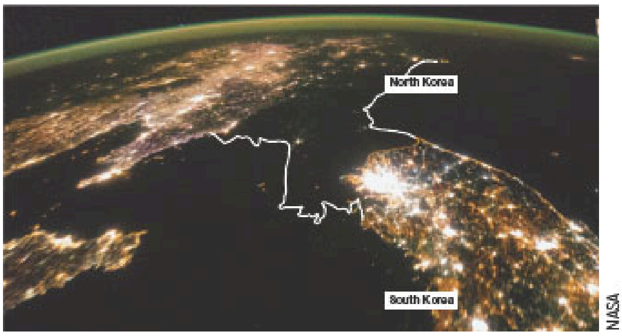

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16-3c. The People’s Republic of China

Unlike Russia, China has sought economic reform under the direction of its Communist Party. Fundamental economic reforms began in China after the death of Mao Zedong in 1976. Much of this reform was due to the leadership of Deng Xiaoping. Mao was devoted to the egalitarian ideal of communist ideology. Under his rule, thoughts of self- interest were counterrevolutionary, and photographs of Marx, Lenin, and Mao hung on every street corner and in every office and factory. Deng shifted priorities by increasing production of consumer office and factory. Deng shifted priorities by increasing production of consumer goods and steering China toward becoming a global economic power. And the results have been dramatic. International trade expanded from less than 1 percent of U.S. trade in 1975 to 13 percent in 2020, and

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Take Note

Many socialist economies are transitioning to adopting market principles to capture the benefits of capitalism. The trick will be doing so while minimizing the potential drawbacks.

16-3d. Privatization versus Nationalization

The previous discussions of Cuba, Russia, and China provide examples of privatization. **Privatization** is the process of turning a government enterprise into a private enterprise. It is the opposite of **nationalization**, which is the act of transforming a private enterprise's assets into government ownership. The motives for nationalization are political as well as economic. Proponents believe that government ownership enables the state to exercise more effective control and equitable redistribution of wealth and income on behalf of the people. Critics argue that government ownership suppresses incentives, entrepreneurship, and private investment that are essential for an enterprise to prosper. During a financial crisis, the argument in favor of nationalization is that a brief period of nationalization is needed to prevent the largest corporations and banks from a downward spiral that affects the entire economy. This is the "too big to fail" argument.

The United States has a history of nationalization—most of which was temporary. But one has endured: Amtrak is a government-owned corporation created in 1971 after railroads had petitioned repeatedly to abandon unprofitable passenger service. As discussed at the conclusion of the chapter on money and the Federal Reserve System, the Resolution Trust Corporation (RTC) was established in 1989 to take over more than 1,000 failed savings and loans institutions (S&Ls) with bad loans and foreclosed homes. After fulfilling its mission to sell the assets of these S&Ls, the RTC was closed in 1995. The financial crisis of the Great Recession generated several nationalizations and General Motors (GM) provides a prime case. With GM facing bankruptcy in 2009, the U.S.

government replaced the CEO and took a 60 percent controlling share, with Canada taking a 12.5 percent share, the United Auto Workers (UAW) taking a 17.5 percent share, and bondholders ending up with the remaining 10 percent. Existing stockholders were given zero shares. However, by 2015, the U.S. and Canadian governments had sold all of their shares of GM stock, and by 2017 the UAW had sold about half of their shares.

Am I on Track?

3. Nationalization

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. describes what has generally taken place in many countries, like Cuba, Russia and China, that have transitioned their economies away from socialism to capitalism.

b. is the process of turning a government enterprise into a private enterprise.

c. has the potential to redistribute wealth and income in a more socially desirable manner but could suppresses incentives, entrepreneurship, and private investment that are essential for an enterprise to prosper.

d. has never occurred in the United States.

Key Terms

Economic system

Traditional economy

Command economy

Market economy

Invisible hand

Mixed economy

Capitalism

Consumer sovereignty

Socialism

Communism

Privatization

Nationalization

Take Note Revisited

- When central planners set prices for goods and service below equilibrium, it creates shortages, which mean long lines, empty shelves, and black markets. Prices set above equilibrium create surpluses and over-production.
- A market economy answers the *What to produce* and *How to produce* questions very effectively.
- No nation in the world precisely fits the two criteria for capitalism; however, the United States comes close.
- Capitalism's strengths include efficiency and freedom. Its weaknesses include a lack of competition, externalities, a lack of public goods and services, growing income disparities, and macroeconomic instability.
- Proponents of socialism argue it is superior in achieving an equitable distribution of income and that national goals can be more easily formulated and pursued under state directives. The critics point to inefficiencies and the possibility that those in power may serve their own interests to the detriment of society at large.
- All real-world economies are a mixture of capitalism and socialism.
- Many socialist economies are transitioning to adopting market principles to capture the benefits of capitalism. The trick will be doing so while minimizing the potential drawbacks.

When an individual or a business plans in a market economy, other individuals are free to make and follow their own plans. Suppose Hewlett-Packard decides to produce *X* number of laser printers and sell them at a certain price. The decision does not prohibit IBM from producing *Y* number of laser printers and selling them for less than Hewlett-Packard's printers. If either firm makes a mistake, only that firm suffers, and other industries are, for the most part, unaffected. However, under a command system, a central economic plan would be made for all laser printer manufacturers. If the central planners order the wrong quantity or quality, there could be major harm to other industries and society. So, there really is a major difference between individual planning and central planning for the entire society.

Sample Quiz

Please see Appendix B for answers to Sample Quiz questions.

1. An economic system is the organizations and methods used to determine

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. what goods and services are produced.

b. how goods and services are produced.

c. for whom goods and services are produced.

d. All of these answers are correct.

2. In a command economy, the basic economic questions are answered by

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. central authority.

b. individual buyers and sellers.

c. traditional methods.

d. None of these answers are correct.

3. Adam Smith was an advocate of

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. mercantilism.

b. a nation maximizing its stock of gold.

c. unrestricted or free trade.

c. unrestricted or free trade.

d. the "visible hand" of public interest.

4. In Adam Smith's competitive market economy, the question of what goods to produce is determined by the

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. "invisible hand" of the price system.

b. "invisible hand" of government.

c. "invisible hand" of public interest.

d. "visible hand" of laws and regulations.

5. Adam Smith wrote that the

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. economic problems of eighteenth-century England were caused by free markets.

b. government should control the economy.

c. pursuit of private self-interest promotes the public interest in a market economy.

d. public or collective interest is not promoted by people pursuing their self-interest.

6. Which of the following is a criticism of capitalism?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Unequal distribution of income

b. Failure to protect the environment

c. Exploitation of workers

d. All of these answers are correct.

7. Which of the following statements is true?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. The doctrine of *laissez-faire* advocates an economic system with extensive government intervention and little individual decision making.

b. In capitalism, income is distributed on the basis of need.

c. Adam Smith was the father of socialism.

d. Most real-world economies are mixed economic systems.

8. Which of the following is a strength of a command-based economic system?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Goods can be allocated based on need rather than willingness and ability to pay.

b. Producers have strong incentives to innovate because successful innovators are rewarded with higher profit.

c. Consumers can transmit their preference for product quality and variety by way of their "dollar votes" cast in the quality and variety by way of their "dollar votes" cast in the marketplace.

d. Because price is freely set based on supply and demand, there are few shortages or surpluses.

9. The term *socialism* refers to which of the following?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. A religion centered on community interaction

b. An economic system characterized by private ownership of resources and decentralized market-price allocation

c. An economic system characterized by government ownership of resources and centralized allocation

d. An economic system characterized by voluntary allocation

10. Karl Marx was a (an)

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. nineteenth-century German philosopher.

b. eighteenth-century Russian economist.

c. fourteenth-century Polish banker.

d. nineteenth-century Russian journalist.

Chapter 17. Growth and the Less-Developed Countries

Chapter Objectives

1. Distinguish industrially advanced countries from less-developed countries.
2. Summarize the problems with using GDP per capita as a measure of economic development.
3. Compare and contrast economic growth and economic development.
4. Evaluate the sources of economic growth.
5. Describe how advanced economies have tried to promote economic growth and development in less-developed countries.

Introduction

How would your life be different if you lived in a poor developing country instead of the United States? It is unlikely that anyone in your family would have a telephone or a car. You surely would not own a personal computer or an iPad.

a telephone or a car. You surely would not own a personal computer or an iPad. You would not have new clothes or be enrolled in a college or university studying economics. You would not be going out to restaurants or movies. You would be fortunate to have shoes and one full meal each day. You would receive little or no medical care and live in unsanitary surroundings. Hunger, disease, and squalor would engulf you. In fact, the World Bank estimates that hundreds of millions of people survive on $1.90 or less per day. It is exceedingly difficult for Americans to grasp that 9 percent of the world's population lives at such a meager subsistence level. This chapter's important task is unraveling the secrets of economic growth and development. Why do some countries prosper while others decline?

At different times in history, Egypt, China, Italy, and Greece were highly developed by the standards of their time. On the other hand, at one time the United States was a struggling, relatively poor country on the path to becoming a rich country. Its growth came in three stages: First, was the agricultural stage. Then came the manufacturing stage when industries such as railroads, steel, and automobiles were driving forces toward economic growth. And, finally, there has been a shift toward service industries. This is the U.S. success story, but it is not the only road countries can follow to lift themselves from the misery of poverty.

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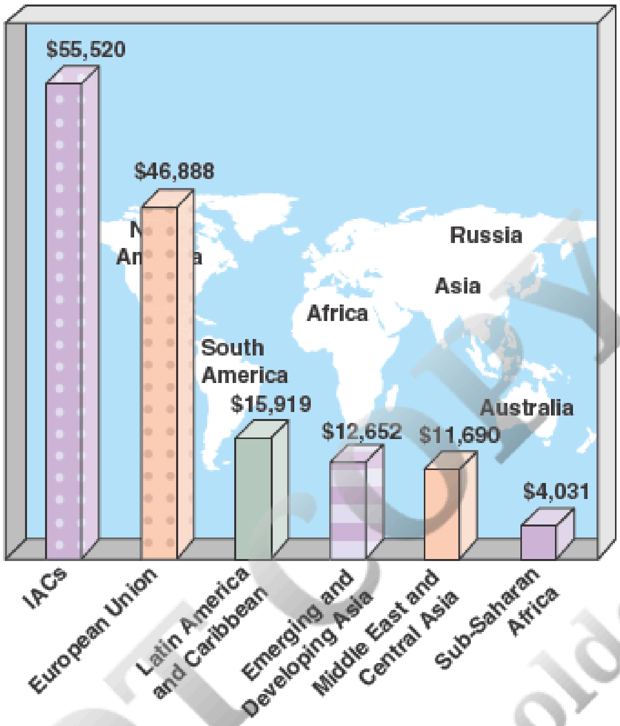
17-1. Comparing Developed and Less-Developed Countries

Income disparity exists not only among families within the United States, but also among nations. In this section, the great inequality of income between the families of nations will be used to classify nations as rich or poor.

Exhibit 2 Average GDP per Capita for IACs and LDCs by Region, 2021



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Source: International Monetary Fund, World Economic Outlook Database April 2021, https://www.imf.org/en/Publications/WEO/weo-database/2021/April

This exhibit shows average GDP per capita by regions of the world for 2021. The differences between the rich, industrially advanced countries (IACs) and the poor, less-developed countries (LDCs) in the various regions of the world are enormous. For example, the average citizen in the IACs had an income 13.7 times that of the average citizen in the LDCs of Sub-Saharan Africa.

17-1b. Problems with GDP per Capita Comparisons

Several problems are associated with using GDP per capita to compare rich versus poor countries. First, there is a measurement problem because countries tabulate GDP with differing degrees of accuracy. LDCs in general do not use sophisticated methods of gathering and processing GDP and population data. For example, in countries example, in countries

427

Take Note

GDP per capita comparisons among nations can be misleading because GDP per capita does not account for income distribution.

Third, GDP per capita comparisons between nations are subject to conversion problems. Making these data comparisons requires converting one nation's currency, say, Japan's yen, into a common currency, the U.S. dollar. Because, as explained in the chapter on international trade and finance, the value of a country's currency can rise or fall for many reasons, the true value of a nation's output can be distorted. For example, during a given year, one government might maintain an artificially high exchange rate and another government might not.

Take Note

A conversion problem may widen or narrow the GDP per capita gap between nations because the fluctuations in exchange rates do not reflect actual differences in the value of goods and services produced.

17-1c. Quality-of-Life Measures of Development

GDP per capita measures market transactions, but this measure does not give a complete picture of differences in living standards among nations. Exhibit 3 presents other selected socioeconomic indicators of the quality of life. These are variables such as life expectancy at birth, infant mortality rate, literacy rate, per capita electricity consumption, and economic freedom ranking. Take a close look at the statistics in Exhibit 3. These data reflect the dimensions of poverty in
428 many of the LDCs. For example, a person born in Japan has a life expectancy that is much longer than a person born in Mozambique, and the infant mortality rate is dramatically higher in Mozambique. Per capita electricity consumption

measures the use of nonhuman energy to perform work. In IACs, most work is done by machines, and in LDCs, virtually all work is done by people. For example, the average American uses 12,977 kilowatts of electricity per year, while the average person in Mozambique uses only 479 kilowatts. Finally, it is interesting to note that GDP per capita and other quality-of-life indicators are related to the ranking in economic freedom.

Exhibit 3 Quality-of-Life Indicators for Selected Countries, 2021

Country	(1) GDP per Capita	(2) Life Expectancy at Birth (years)	(3) Infant Mortality Rate *	(4) Literacy Rate *	P E Co
United States	$63,309	79	6	99%	
Japan	42,928	84	2	99	
China	11,819	77	7	97	
Mexico	9,247	75	12	95	
India	2,191	70	28	74	
Bangladesh	2,122	73	26	61	
Mozambique	425	61	55	61	

Source: International Monetary Fund, World Economic Outlook Database April 2021, https://www.imf.org/en/Publications/WEO/weo-database/2021/April, World Bank, http://www.worldbank.org/en/country, and the Heritage Foundation, http://www.heritage.org/index/ranking.

How good an indicator of the quality of life is GDP per capita? Exhibit 3 reflects the principle that GDP per capita is highly correlated with alternative measures of the quality of life.

Take Note

In general, GDP per capita is highly correlated with alternative measures of quality of life.

Am I on Track?

1. Which of the following statements is true when comparing industrially advanced countries (IACs) and less-developed countries (LDCs)?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. LDCs' GDP per capita is subject to greater measurement errors than data for IACs.

b. GDP per capita comparisons among nations can be misleading because GDP per capita does not account for income distribution.

c. In general, GDP per capita is highly correlated with alternative measures of quality of life.

d. All of the above.

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d. All of the above.

17-2. Economic Growth and Development Around the World

Economic growth and development are major goals of IACs and LDCs alike. People all over the world strive for a higher quality of life for their generation and future generations. However, growth is closer to a life-or-death situation for many LDCs, such as Bangladesh and Mozambique.

Economic growth and economic development are somewhat different, but related, concepts. As shown in Exhibit 4, recall from Chapter 2 that economic growth is the ability of an economy to produce greater levels of output, represented by an outward shift of its production possibilities curve (PPC). Thus, economic growth is defined on a *quantitative* basis using the percentage change in GDP per capita. When a nation's GDP rises more rapidly than its population, GDP per capita rises, and the nation experiences a higher aver-age absolute standard of living. Conversely, if GDP expands less than the population of a nation, GDP per capita falls, and the nation experiences a lower average standard of living.

nation’s economic well-being.

nation's economic well-being.

17-2a. Endowment of Natural Resources

Most of the LDCs have comparatively limited bases of natural resources, including mineral deposits and arable land resources. In these countries, most of the available land is used for agricultural production, and clearing tropical forests to obtain more land can cause soil erosion. Also, tropical climates prevail in Central and South America, Africa, the Indian subcontinent, and Southeast Asia. The hot, humid climate in these regions is conducive to weed and insect infestations that plague agriculture.

Although a narrow base of resources does pose a barrier to economic growth and development, no single conclusion can be drawn. For example, how have Hong Kong, Japan, and Israel achieved high standards of living in spite of limited natural resource bases? Each has practically no minerals, little fertile land, and no domestic sources of energy. Nonetheless, these economies have become prosperous. In contrast, Argentina and Venezuela have abundant fertile land and minerals. Yet these and other countries have been growing slowly or not at all. Venezuela, for example, is one of the most oil-rich countries in the world. Ghana, Kenya, and Bolivia are also resource-rich countries that are poor, with little or no economic growth.

Take Note

Natural resource endowment can promote economic growth, but a country can develop without a large natural resource base.

17-2b. Investment in Human Resources

A low level of human capital can also present a barrier to economic growth and development. Recall that human capital is the education, training, experience, and health that improve the knowledge and skills of workers to produce goods and services. In most of the LDCs, investment in human capital is much less than in the IACs. Look back at column (4) in Exhibit 3. Consider how a low literacy rate could affect a country's overall economy. A lower literacy could hamper productivity among workers, which in turn can stifle economic growth. In fact, often times workers in poorer countries have not had the opportunity to develop skills in a wide range of industries that can promote more rapid economic growth. Further complicating matters is a "brain drain" problem because the best educated and trained workers of poor countries often leave to pursue careers in richer countries. Column (2) of Exhibit 3 also gives a measure of health among countries with varying levels of GDP per capita. As the GDP per capita falls, the life expectancy at birth falls. Thus, wealthy countries have tended to have both the advantage of more educational opportunities as well as more positive health outcomes.

Take Note

Investment in human capital promotes economic growth and development.

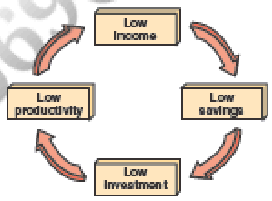
Thus far, the discussion has been about the quality of labor. We must also talk about the quantity of labor because productivity is related to both the quality and quantity of labor. Overpopulation is a problem for LDCs. In a nutshell, here is why: Other factors held constant, population (labor force) growth can increase a country's GDP. Yet rapid population growth can convert an expanding GDP into a GDP per capita that is stagnant, slow growing, or negative. Stated another way, there is no gain to the output available to the average person if an increase in output is more than matched by an increase in the number of mouths that must be fed. Suppose the GDP of an LDC grows at, say, 3 percent per year. If there is no growth in population, GDP per capita also grows at 3 percent per year. But what if the population also grows at 3 percent per year? The result is that GDP per capita remains unchanged. If population growth is instead only 1 percent per year, GDP per capita rises 2 percent per year. Obstacles to population control are great and include strong religious and sociocultural arguments against birth control programs.

Take Note

Rapid population growth combined with low human capital investment explains why many countries are LDCs.

17-2c. Accumulation of Capital

It did not take long for Robinson Crusoe stranded on a deserted island to invest in a net in order to catch more fish than he could catch with his hands. Similarly, farmers working with modern tractors can cultivate more acres than farmers working with horse-drawn plows. Recall from Chapter 1 that capital in economics means factories, tractors, trucks, roads, computers, irrigation systems, electricity-generating facilities, and other human-made goods used to produce goods and services.

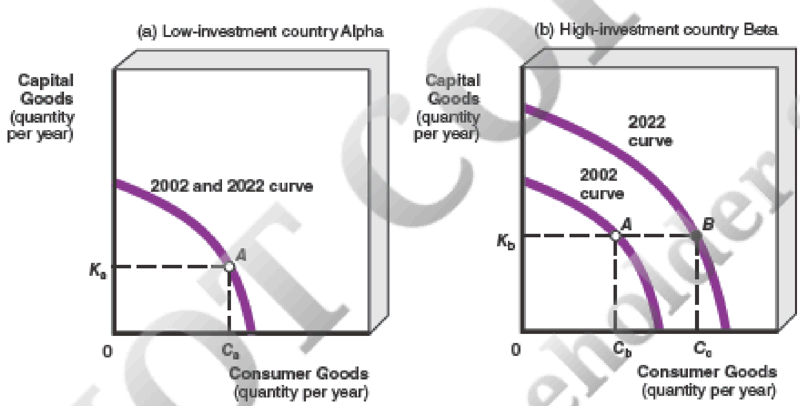


Details

LDCs suffer from a critical shortage of capital. A family in Somalia owns little in the way of tools except a wooden plow. To make matters worse, roads are terrible, there are few electric power plants, and telephone lines are scarce. As shown in Exhibit 5, recall from Chapter 2 that a high-investment country can shift its production

possibilities curve outward, but investment in capital goods is not a "free lunch." When more resources are used to produce more factories and machines, there is an opportunity cost of fewer resources available for the production of current consumer goods. This means that LDCs are often caught in a vicious circle of poverty. A **vicious circle of poverty** is the trap in which countries are poor and cannot afford to save. And low savings translate into low investment. Low investment results in low productivity, which, in turn, keeps incomes low. Any savings that do exist among higher-income persons in poor LDCs are often invested in IACs. This phenomenon is often called "capital flight." These wealthy individuals are afraid to save in their own countries because they fear that their governments may be overthrown and their savings could be lost.

Exhibit 5 Alpha's and Beta's Present and Future Production Possibilities Curves



Details

In part (a), each year Alpha produces only enough capital (K_a) to replace existing capital that is worn out. Without capital accumulation and assuming other resources remain fixed, Alpha is unable to shift its production possibilities curve outward. In part (b), each year Beta produces K_b capital, which is more than the amount required to replenish its depreciated (worn out) capital. In 2022, this expanded capital provides Beta with the extra production capacity to shift its production possibilities curve to the right. If Beta chooses point *B* on its curve, it has the production capacity to increase the amount of consumer goods from C_b to C_c without producing fewer capital goods.

The United States and other nations have attempted to provide LDCs with foreign aid for investment so that they might grow. These countries desperately need more factories and infrastructure. **Infrastructure** is capital goods usually provided by the government, including highways, bridges, waste and water systems, and airports. Unfortunately, the amount of foreign aid provided to the LDCs for capital improvements is relatively small, and as explained earlier, workers in the LDCs lack the skills necessary to use the most modern forms of capital. More specifically, LDCs face a major obstacle to capital accumulation because of the lack of entrepreneurs to assume the risks of capital formation.

Take Note

Investment is a key ingredient for economic growth and development.

17-2d. Technological Progress

As explained earlier in Chapter 2, holding natural resources, labor, and capital constant, advancing the body of knowledge applied to production shifts the production possibilities curve of a country outward. In fact, technological advances have been at the heart of economic growth and development in recent history. During the last 250 years, brainpower has invented new power-driven machines, advanced communication devices, new energy sources, and countless ways to produce more output with the same resources. How have innovative products improved your productivity? Consider, to name just a few products, the impact of personal computers, word processing software, cell phone photography, the iPhone, and the Internet. In contrast, in many poor countries, waterwheels still bring water to the surface, cloth is woven on handlooms, and oxcarts are the major means of transportation. Consequently, large inputs of human effort are used relative to capital resources.

The United States and other IACs have provided the world with an abundant accumulation of technological knowledge that might be adopted by those LDCs without them having to undertake the required costs of research and development. However, the results of this technology transfer process have been mixed. For example, countries such as China, Hong Kong, Singapore, Taiwan, South Korea, and Japan have surely achieved rapid growth in part from the benefit of technological borrowing. The other side of the coin is that much benefit of technological borrowing. The other side of the coin is that much available technology is not well-suited to LDCs. The old saying “You need to learn to walk before you can run” often applies to the LDCs. For example, small farms of most LDCs are not well-suited for much of the agricultural technology developed for IACs’ large farms. And how many factories in the LDCs are ready to use the most modern robotics in the production process? Stated differently, LDCs need appropriate cost-effective technology, rather than necessarily the latest technology.

Take Note

Many LDCs continue to experience low growth rates even though IACs have developed advanced technologies that the world can utilize.

17-2e. Political Environment

The preceding discussion leads to the generalization that in order for LDCs to achieve economic growth and development, they must wisely use natural resources, invest in human and physical capital, and adopt appropriate technology. This list of policies is not complete. LDC governments must also create a political environment favorable to economic growth. All too often a large part of the problem in poor countries is that resources are wasted as a result of war and political instability. Political leaders must not be corrupt and/or incompetent. Instead of following policies that favor a small elite ruling class, LDC governments must adopt appropriate domestic and international economic policies, discussed under the following three headings of stable legal and political systems, infrastructure, and international trade.

Stable Legal and Political Systems

A basic governmental function is to establish stable legal and political systems. Beyond establishing a fair and just judicial system and a predictable and stable political environment, government needs to foster a monetary system with stable prices, promote competitive markets, and protect and enforce private property rights. In particular, expropriation of private property rights among LDCs can be a big barrier to growth. Well-defined private property rights have fostered economic growth in the IACs because this institutional policy has encouraged an entrepreneurial class. Private ownership provides individuals with the incentive to save money and invest in businesses. A stable political environment that ensures private ownership of profits also provides an incentive for individuals in other countries to invest in developing poor countries.

Infrastructure

Assuming an LDC government maintains stable legal and political systems and the price system is used to allocate goods and services, it is vital that wise decisions be made concerning infrastructure. Indeed, inadequate infrastructure is one of the greatest problems of LDCs. Without such public goods as roads, schools, bridges, and public health and sanitation services, poor countries are unable to generate the substantial external benefits that are an important ingredient for economic growth and development. From the viewpoint of individual firms, government must provide infrastructure because these public goods projects are too costly for a firm to undertake.

International Trade

In general, LDCs can benefit from an expanding volume of international trade. This is the theory behind the establishment of many international trade agreements including the North American Free Trade Agreement (NAFTA), and international organizations that wish to promote more free and open international trade, like the World Trade Organization (WTO), which are discussed in the chapter on international trade and

Am I on Track?

2. Which of the following statements is *false* about economic growth and development?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Among the key ingredients for economic growth are investments in human capital and infrastructure.

b. The viscous circle of poverty refers to a trap in which countries are poor because they cannot afford to save and invest, but they cannot save and invest because they are poor.

c. Natural resource endowment is a necessary condition for economic growth and development.

d. International trade barriers will stunt economic growth and development.

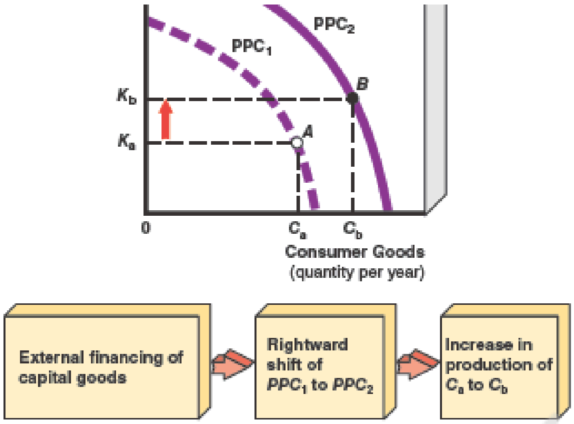
17-3. The Helping Hand of Advanced

Countries

How can poor countries escape the vicious circle of poverty? Low GDP per capita leads to low savings and investment, which lead, in turn, to low growth. Although there is no easy way for poor countries to become richer, the United States and other advanced countries can help. The necessary funds for investment can come from the LDCs' own domestic savings, or it can come from
437 external sources that include foreign private investment, foreign aid, and foreign loans.

Exhibit 7 illustrates how external funds can shift a country's production possibilities curve outward. Here you should look back and review Exhibit 5, which is the starting point, Point *A*, in Exhibit 7. Suppose country Alpha is trapped in poverty and produces only enough capital K_a to replace the existing capital being worn out. Alpha's consumption level is at C_a, corresponding to point *A* on production possibilities curve PPC_1. Because C_a is at the subsistence level, Alpha cannot save and invest by substituting capital for current consumption and move upward along PPC_1. This inability to increase capital means Alpha cannot increase its production possibilities curve in the future. There is a way out of the trap, however, by using external sources. Now assume Alpha receives an inflow of funds from abroad and buys capital goods that increase its rate of investment from K_a to K_b. At K_b, the rate of capital formation exceeds the value of capital depreciated, and Alpha's production possibilities curve shifts rightward to PPC_2. Economic growth made possible by external investment means Alpha can improve its standard of living by increasing its consumption level from C_a at point *A* on PPC_1 to C_b at point *B* on PPC_2.

Exhibit 7 The Effect of External Financing on an LDC's Production Possibilities Curve



Details

The poor country of Alpha is initially operating at point *A* on production possibilities curve PPC_1, with only enough capital (K_a) to replace depreciation. If C_a is the consumption level of subsistence, Alpha's economy cannot grow by reducing consumption. An inflow of external funds from abroad permits the LDC to increase its capital from K_a to K_b and its production possibilities curve shifts outward to PPC_2. At PPC_2, Alpha is able to increase its production of consumer goods from C_a to C_b.

LDCs' own domestic savings, or it can come from external sources that include foreign private investment, foreign aid, and foreign loans.

Exhibit 7 illustrates how external funds can shift a country's production possibilities curve outward. Here you should look back and review Exhibit 5, which is the starting point, Point *A*, in Exhibit 7. Suppose country Alpha is trapped in poverty and produces only enough capital K_a to replace the existing capital being worn out. Alpha's consumption level is at C_a, corresponding to point *A* on production possibilities curve PPC_1. Because C_a is at the subsistence level, Alpha cannot save and invest by substituting capital for current consumption and move upward along PPC_1. This inability to increase capital means Alpha cannot increase its production possibilities curve in the future. There is a way out of the trap, however, by using external sources. Now assume Alpha receives an inflow of funds from abroad and buys capital goods that increase its rate of investment from K_a to K_b. At K_b, the rate of capital formation exceeds the value of capital depreciated, and Alpha's production possibilities curve shifts rightward to PPC_2. Economic growth made possible by external investment means Alpha can improve its standard of living by increasing its consumption level from C_a at point *A* on PPC_1 to C_b at point *B* on PPC_2.

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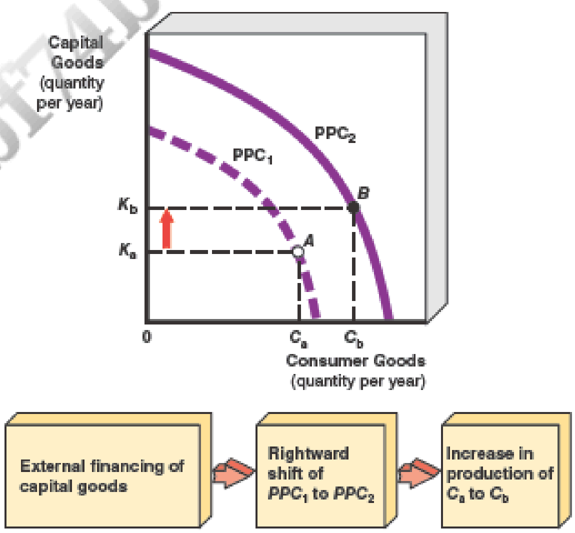

Details

The poor country of Alpha is initially operating at point A on production possibilities curve $\mathbf{PPC_1}$, with only enough capital (K_a) to replace depreciation. If C_a is the consumption level of subsistence, Alpha's economy cannot grow by reducing consumption. An inflow of external funds from abroad permits the LDC to increase its capital from K_a to K_b and its production possibilities curve shifts outward to $\mathbf{PPC_2}$. At $\mathbf{PPC_2}$, Alpha is able to increase its production of consumer goods from C_a to C_b.

17-3a. Foreign Private Investment

Many countries' development benefits from private-sector foreign investment from private investors. For example, Microsoft might finance construction of a plant in the Philippines to manufacture software, or Bank of America may make loans to the government of Haiti. These large multinational corporations and commercial banks supply scarce capital to the LDCs. A multinational corporation is a firm with headquarters in one country and one or more branch or plants in other countries. Multinational firms often seek new investment opportunities in LDCs because these poor countries offer abundant supplies of low-wage labor and raw materials. But the political environment in the LDCs must be conducive to investment. Multinational corporations often become the largest employers, largest taxpayers, and largest exporters in the LDCs.

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17-3b. Foreign Aid

Less than 1 percent of the U.S. federal budget is spent on foreign aid. **Foreign aid** is the transfer of money or resources from one government to another with no repayment required. These transfers may be made as outright grants, technical assistance, or food supplies. Foreign aid flows from country to country through governments and voluntary agencies, such as the Red Cross, CARE, and Church World Relief. The United States distributes most of its official development assistance through the Agency for International Development, established in 1961. The **Agency for International Development (AID)** is the agency of the U.S. State Department that is in charge of U.S. aid to foreign countries.

One reason that countries such as the United States provide foreign aid to LDCs is the belief that it is a moral responsibility of richer countries to share their wealth with poorer countries. A second reason is that it is in the best economic interest of the IACs to help the LDCs. When these countries become more prosperous, the IACs have more markets for their exports, and thereby all countries benefit from trade.

The LDCs often complain that foreign aid comes with too many economic and political strings attached. The aid is often offered on a take-it-or-leave-it basis, tied to policies other than basic trade policies, such as human rights, politics, or the military. Consequently, many LDCs argue for "trade, not aid." If the IACs would simply buy more goods from the LDCs, the LDCs could use their gains in export earnings to purchase more capital and to invest in other ingredients needed for growth. Many people in the United States believe that most foreign needed for growth. Many people in the United States believe that most foreign aid is a waste of money because it is misused by the recipient countries. This belief has caused Congress to grow increasingly reluctant to send taxpayers' money abroad except in the clearest cases of need or for reasons of national security.

in Washington, D.C., and its main purpose is to channel funds from rich countries to poor countries. Voting shares are in proportion to the money provided by the members. The World Bank makes “last resort” loans to LDCs that are limited to financing basic infrastructure projects, such as schools, health centers, dams, irrigation systems, and transportation facilities, for which private financing is not available. In addition, the World Bank helps LDCs get loans from private lenders by insuring the loans. Thus, the poor countries are able to complete projects and use the economic returns to pay off the lender with interest.

The World Bank is not the only multilateral lending agency making loans to LDCs. The World Bank’s partner institution is the International Monetary Fund. The **International Monetary Fund (IMF)** is the lending agency that makes short-term conditional low-interest loans to developing countries. The IMF was also established at Bretton Woods in 1944. Its purpose is to help countries overcome short-run financial difficulties. Typically, the IMF makes conditional loans that require the debtor countries to implement fiscal and monetary policies that will alleviate balance-of-payments deficit problems and promote noninflationary economic growth. The 189-member IMF is not a charitable institution. It operates like a credit union with funding quotas that earn interest on the loans. The United States is the IMF’s largest shareholder and thus has effective veto power over IMF decisions.

The IMF has performed a major role in providing short-term loans to developing countries and to economies making the transition to capitalism. In the late 1990s, the IMF provided multibillion-dollar bailouts to Russia, several Asian countries, Brazil, and other countries experiencing economic turmoil. In recent years, the IMF and some of the EU countries made rescue loans to debt-plagued Greece with the condition of deep cut-backs in government spending and tax hikes. Critics argue that as long as governments believe the IMF will bail them out, they will fail to correct their own problems. IMF supporters counter that if the IMF does not intervene, troubled economies will default on outstanding loans and cause a worldwide financial ripple effect. Critics respond that a flood of low-cost short-term loans from the IMF encourages bad government policies and excessive risk taking by banks. Consequently, a bailout in a crisis generates new financial crises and reduces world economic growth.

Am I on Track?

3. The agency of the U.S. State Department that is in charge of U.S. aid to foreign countries is the

SHOW ANSWER

SHOW ANSWER

a. World Trade Organization (WTO).

b. International Monetary Fund (IMF).

c. Agency for International Development (AID).

d. World Bank

Summary

- **GDP per capita** provides a general index of a country's standard of living. Countries with low GDP per capita and slow growth in GDP per capita are less able to satisfy basic needs for food, shelter, clothing, education, and health.
- **Industrially advanced countries (IACs)** are countries with high GDP per capita, and output is produced by technologically advanced capital. Countries that have high incomes without wide-spread industrial development, such as the oil-rich Arab countries, are not included in the IAC list.
- **Less-developed countries (LDCs)** are countries with low production per person. In these countries, output is produced without large amounts of technologically advanced capital and without well-educated labor. The LDCs account for about three-fourths of the world's population.
- The *Four Tigers of the Pacific Rim* are Hong Kong, Singapore, South Korea, and Taiwan. These recently industrialized countries have achieved high growth rates and standards of living.
- GDP per capita comparisons are subject to three problems:

  (1) the accuracy of LDC data is questionable,

  (2) GDP per capita ignores income distribution,

  (3) fluctuations in exchange rates affect GDP per capita gaps between countries.
- Economic growth and economic development are related, but somewhat different, concepts. Economic growth is measured *quantitatively* by GDP per capita, while economic development is a broader concept that includes *qualitative* factors. In addition to GDP per capita, economic development includes quality-of-life measures, such as life expectancy at

birth, adult literacy rate, and per capita energy consumption.

- Economic growth and development are the result of a complex process that is determined by five major factors:

  (1) natural resources,

  (2) human resources,

  (3) capital,

  (4) technological progress, and

  (5) the political environment.

  There is no single correct strategy for economic development and a lack of strength in one or more of the five areas does not prevent growth.

- The **vicious circle of poverty** is a trap in which an LDC is too poor to save and therefore it cannot invest and shift its production possibilities curve outward. As a result, the LDC remains poor. One way for a poor country to gain savings, invest, and grow is to use funds from external sources such as foreign private investment, foreign aid, and foreign loans.

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Take Note Revisited

- Less-developed countries' GDP per capita is subject to greater measurement errors than data for industrially advanced countries.
- GDP per capita comparisons among nations can be misleading because GDP per capita does not account for income distribution.
- A conversion problem may widen or narrow the GDP per capita gap between nations because the fluctuations in exchange rates do not reflect actual differences in the value of goods and services produced.
- In general, GDP per capita is highly correlated with alternative measures of quality of life.

- Natural resource endowment can promote economic growth, but a country can develop without a large natural resource base.
- Investment in human capital promotes economic growth and development.
- Rapid population growth combined with low human capital investment explains why many countries are LDCs.
- Investment is a key ingredient for economic growth and development.
- Many LDCs continue to experience low growth rates even though IACs have developed advanced technologies that the world can utilize.
- Imposing trade barriers and establishing artificially high exchange rates will reduce a country's economic growth and development.
- There is no single strategy for economic growth and development.

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Study Questions and Problems

Please see Appendix A for answers to the odd-numbered questions. Your instructor has access to the answers for even-numbered questions.

1. What is the difference between industrially advanced countries (IACs) and less-developed countries (LDCs)? List five IACs and five LDCs.

   SHOW ANSWER

2. Explain why GDP per capita comparisons among nations are not a perfect measure of differences in economic well-being.

3. Assume you are given the following data for country Alpha and country Beta:

Country	GDP per Capita
Alpha	$25,000
Beta	15,000

   a. Based on the GDP per capita data given here, in which country would you prefer to live?

   SHOW ANSWER

   b. Now assume you are given the following additional quality-of-life data. In which country would you prefer to reside?

Country	Life Expectancy at Birth (years)	Daily per Capita Calorie Supply	Per Capita Energy Consumption *
Alpha	65	2,500	3,000
Beta	70	3,000	4,000

SHOW ANSWER

4. What is the difference between economic development and economic growth? Give examples of how each of these concepts can be measured.

5. Do you agree with the argument that the rich nations are getting richer and the poor nations are getting poorer? Is this an oversimplification? Explain.

SHOW ANSWER

6. Explain why it is so difficult for poor LDCs to generate investment in capital in order to increase productivity and growth and, therefore, improve their standard of living.

7. Why is the quest for economic growth and development complicated?

SHOW ANSWER

8. Indicate whether each of the following is associated with a high or low level of economic growth and development:

	High	Low
a. Overpopulation	____________	____________
b. Highly skilled labor	____________	____________
c. High savings rate	____________	____________
d. Political stability	____________	____________
e. Low capital accumulation	____________	____________
f. Advanced technology	____________	____________
g. Highly developed infrastructure	____________	____________
h. High proportion of agriculture	____________	____________
i. High degree	____________	____________

f. High degree of income inequality	______	______

9. Without external financing from foreign private investment, foreign aid, and foreign loans, poor countries are caught in the vicious circle of poverty. Explain. How does external financing help poor countries achieve economic growth and development?

SHOW ANSWER

10. What are some of the problems for LDCs of accepting foreign aid?

11. Why would an LDC argue for "trade, not aid"?

SHOW ANSWER

12. Explain the differences among the Agency for International Development (AID), the World Bank, and the International Monetary Fund (IMF).

13. Suppose country Alpha has a production possibilities curve closer to the origin than the curve for country Beta. Now assume Alpha experiences a 3 percent growth rate in GDP for ten years and Beta experiences a 6 percent growth rate in GDP for ten years. At the end of five years, which of the following is the best prediction for the standard of living?

    (1) Alpha's residents are better off.

    (2) Beta's residents are better off.

    (3) Which country's residents are better off cannot be determined.

SHOW ANSWER

14. Imagine you are an economic adviser to the president of a poor LDC. The president is seeking policies to promote economic growth and a higher standard of living for citizens of this country. You are asked whether adopting a minimum wage equal to the average of the IACs' average hourly wages would achieve these goals. Recall the discussion of the minimum wage from Chapter 4 and evaluate this policy.

Sample Quiz

Please see Appendix B for answers to Sample Quiz questions.

1. Which of the following is a problem when comparing GDP per capita between nations?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. GDP per capita fails to measure income distribution.

b. Fluctuations in exchange rates affect differences in GDP per capita.

c. GDP per capita is subject to greater measurement errors for LDCs compared to IACs.

d. All of the above answers are correct.

2. GDP per capita is a relatively good measurement of

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. the distribution of income.

b. purchasing power.

c. household production.

d. the standard of living.

3. Which of the following is infrastructure?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Police

b. Training and education

c. Highways

d. All of the answers are correct.

4. Which of the following statements explains the vicious circle of poverty?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. By investing in education and infrastructure at the same time, the country can overcome the problems of poverty.

b. Poverty arises out of the lack of investment, but countries cannot invest because they are poor.

c. A nation can shift its production possibilities curve inward by shifting more resources into the production of capital goods.

d. A nation can shift its production possibilities curve outward by shifting more resources into the production of consumer goods.

5. Which of the following is not a characteristic of most less-developed countries?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Inadequate human capital

b. Inadequate capital goods

b. Inadequate capital goods

c. High population growth rate

d. Inadequate water supplies

e. High productivity

6. Compared to IACs, LDCs are often characterized by

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. lower life expectancy.

b. lower adult literacy.

c. lower per capita energy consumption.

d. All of the answers are correct.

7. Real GDP per capita and other alternative measures of the quality of life are

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. independent.

b. directly correlated.

c. poorly correlated.

d. inversely related.

8. Economic development encompasses which of the following measures?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Economic growth

b. The political environment

c. Education

d. All of the answers are correct.

9. Which of the following is a characteristic of an LDC?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Capital flight

b. Vicious circle of poverty

c. Lack of entrepreneurs

d. All of the answers are correct.

10. Economic growth and development in LDCs are low because many of them lack

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. savings.

b. infrastructure.

c. a political environment favorable to growth.

d. All of the answers are correct.

11. Which of the following is a *true* statement?

11. Which of the following is a *true* statement?

a. The LDC classification is of questionable accuracy.

Road Map for Chapters 15, 16 and 17

The International Economy

This road map feature helps you tie together material in the part as you travel the Economic Way of Thinking Highway. The following are review questions listed by chapter from the previous part. The correct answers to the multiple choice questions are given in Appendix C.

Chapter 15: International Trade and Finance

1. **Key Concept: Exchange rate changes**

   Which of the following would cause the U.S. demand curve for Japanese yen to shift to the right?

   SHOW ANSWER

   SHOW ANSWER

   SHOW ANSWER

a. An increase in the U.S. inflation rate compared to the rate in Japan.

b. A higher real rate of interest on investments in Japan than on investments in the United States.

c. The popularity of Japanese products increases in the United States.

d. All of the answers above are correct.

2. Key Concept: Exchange rate changes

In the foreign exchange market, where Japanese yen and United States dollars are traded, which of the following would cause the supply of dollars curve to shift to the right?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Japanese imports become less popular.

b. The value of the dollar falls.

c. The supply of dollars decreases.

d. Japanese imports become more popular.

3. Key Concept: Impact of relative price level changes

An increase in inflation in the United States relative to the rate in France would make

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. U.S. goods relatively less expensive in the United States and in France.

b. French goods relatively less expensive in the United States, and U.S. goods relatively more expensive in France.

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c. French goods relatively more expensive in the United States and in France.

d. French goods relatively more expensive in the United States, and U.S. goods relatively less expensive in France.

4. Key Concept: Impact of relative price level changes

If the Japanese price level falls relative to the price level in the United

States, then

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

a. Japanese buy U.S. exports.

b. the demand for dollars decreases.

c. the supply of dollars increases.

d. the value of the dollar falls.

e. All of the answers above are correct.

Chapter 16: Economies in Transition

5. Key Concept: Command economy

Which of the following statements is *true* about a command economy?

SHOW ANSWER

SHOW ANSWER

SHOW ANSWER

Shortages occur because of complexities in the planning process.

Planners determine what, how many, and for whom goods and services are to be produced.

Planners often allocate goods and services using a rationing system.

The quality of produced goods and services tends to be inferior.

All of the answers are correct.