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Economics Classics

国际贸易

（英文版·第十五版）

International Trade

(Fifteenth Edition)

罗伯特·J.凯伯（Robert J. Carbaugh） 著

CENGAGE Learning
圣智学习

中国人民大学出版社

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党的十六大确立了“引进来，走出去”的发展战略，使得“国际化”复合型人才的需求不断增加。这就对我国一般本科院校多年来所采取的单一语言（母语）教学提出了严峻挑战，经济类专业双语教学改革迫在眉睫。

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第一，教材体系设计完整。本系列教材全部为国外知名出版公司的优秀教材，涵盖了经济类专业的所有主要课程。

第二，保持英文原版教材特色。本系列教材依据国内实际教学需要以及广泛的适应性，部分对原版教材进行了全文影印，部分在保持原版教材体系结构和内容特色的基础上进行了适当删减。

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本系列教材既适合高等院校经济类专业的本科教学使用，也适合从事经济类工作和研究的广大从业者阅读和学习。我们在选书、改编过程中虽然全面听取了专家、学者和教师的意见，努力做到满足广大读者的需求，但由于各教材的作者所处的政治、经济和文化背景不同，书中内容仍可能有不妥之处，我们真诚希望广大读者提出宝贵意见和建议，以便我们在以后的版本中不断改进和完善。

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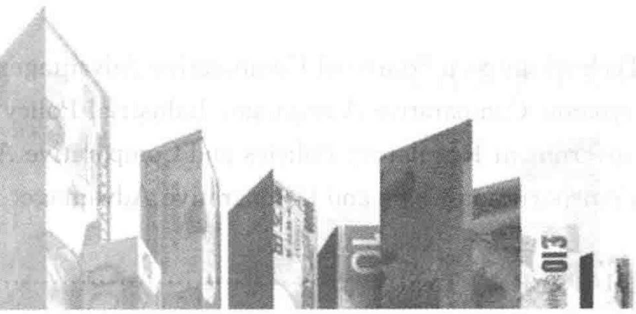

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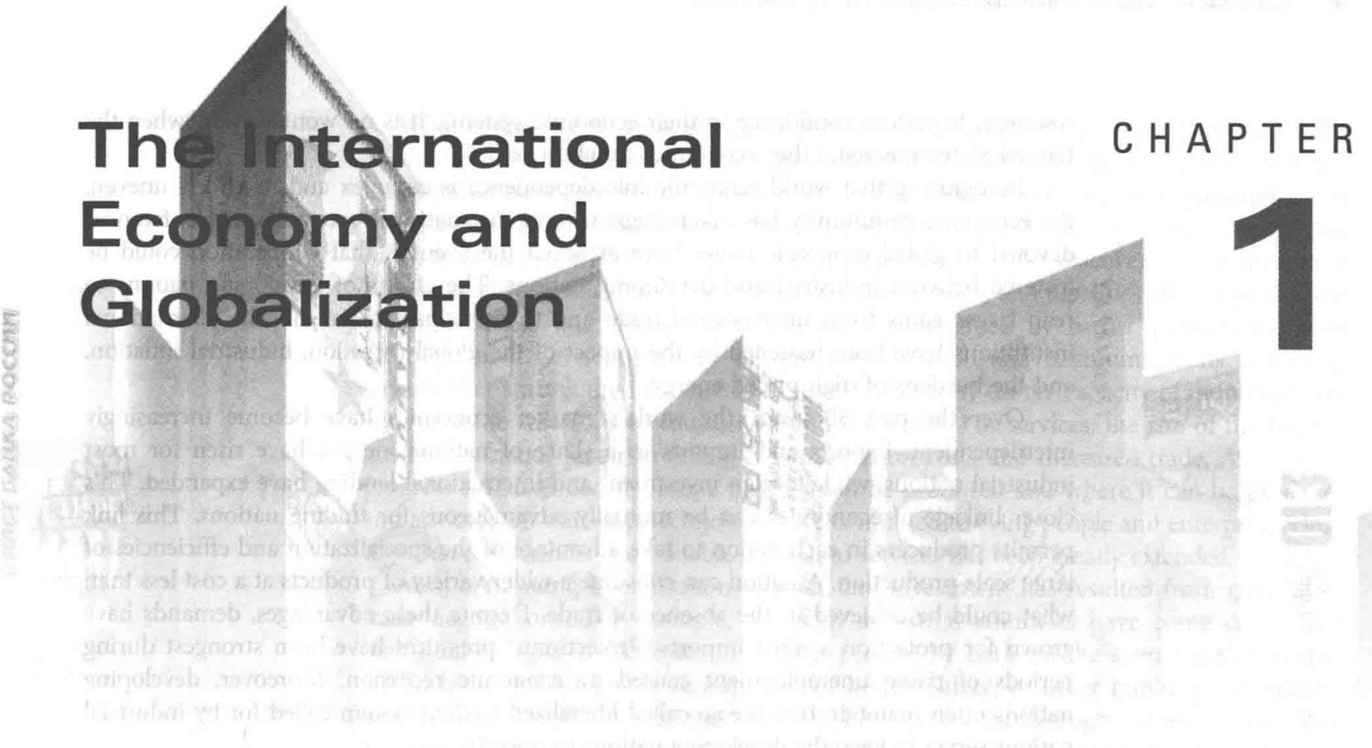

CHAPTER 1

The International Economy and Globalization

In today's world, no nation exists in economic isolation. All aspects of a nation's economy—its industries, service sectors, levels of income and employment, and living standard—are linked to the economies of its trading partners. This linkage takes the form of international movements of goods and services, labor, business enterprise, investment funds, and technology. Indeed, national economic policies cannot be formulated without evaluating their probable impacts on the economies of other countries.

The high degree of **economic interdependence** among today's economies reflects the historical evolution of the world's economic and political order. At the end of World War II, the United States was economically and politically the most powerful nation in the world, a situation expressed in the saying, "When the United States sneezes, the economies of other nations catch a cold." But with the passage of time, the U.S. economy has become increasingly integrated into the economic activities of foreign countries. The formation in the 1950s of the European Community (now known as the European Union), the rising importance in the 1960s of multinational corporations, the market power in the 1970s enjoyed by the Organization of Petroleum Exporting Countries (OPEC), the creation of the euro at the turn of the twenty-first century, and the rise of China as an economic power in the early 2000s have all resulted in the evolution of the world community into a complicated system based on a growing interdependence among nations.

The global recession of 2007–2009 provides an example of economic interdependence. The immediate cause of the recession was a collapse of the U.S. housing market and the resulting surge in mortgage loan defaults. Hundreds of billions of dollars in losses on these mortgages undermined the financial institutions that originated and invested in them. Credit markets froze, banks would not lend to each other, and businesses and households could not get loans needed to finance day-to-day operations. This shoved the economy into recession. Soon the crisis spread to Europe. European banks were drawn into the financial crisis in part because of their exposure to defaulted mortgages in the United States. As these banks had to write off losses, fear and uncertainty spread regarding whether banks had enough capital to pay off their debt obligations. The financial crisis also spread to emerging economies such as Iceland and Russia that generally lacked the resources to restore confidence in their economic systems. It is no wonder that "when the United States sneezed, other economies caught a cold."

Recognizing that world economic interdependence is complex and its effects uneven, the economic community has taken steps toward international cooperation. Conferences devoted to global economic issues have explored the avenues that cooperation could be fostered between industrial and developing nations. The efforts of developing nations to reap larger gains from international trade and to participate more fully in international institutions have been hastened by the impact of the global recession, industrial inflation, and the burdens of high priced energy.

Over the past 50 years, the world's market economies have become increasingly interdependent. Exports and imports as a share of national output have risen for most industrial nations, while foreign investment and international lending have expanded. This closer linkage of economies can be mutually advantageous for trading nations. This link permits producers in each nation to take advantage of the specialization and efficiencies of large scale production. A nation can consume a wider variety of products at a cost less than what could be achieved in the absence of trade. Despite these advantages, demands have grown for protection against imports. Protectionist pressures have been strongest during periods of rising unemployment caused by economic recession. Moreover, developing nations often maintain that the so called liberalized trading system called for by industrial nations serves to keep the developing nations in poverty.

Economic interdependence also has direct consequences for a student taking an introductory course in international economics. As consumers, we can be affected by changes in the international values of currencies. Should the Japanese yen or British pound appreciate against the U.S. dollar, it would cost us more to purchase Japanese television sets or British automobiles. As investors, we might prefer to purchase Swiss securities if Swiss interest rates rise above U.S. levels. As members of the labor force, we might want to know whether the president plans to protect U.S. steelworkers and autoworkers from foreign competition.

In short, economic interdependence has become a complex issue in recent times, often resulting in strong and uneven impacts among nations and among sectors within a given nation. Business, labor, investors, and consumers all feel the repercussions of changing economic conditions and trade policies in other nations. Today's global economy requires cooperation on an international level to cope with the myriad issues and problems.

GLOBALIZATION OF ECONOMIC ACTIVITY

When listening to the news, we often hear about globalization. What does this term mean? **Globalization** is the process of greater interdependence among countries and their citizens. It consists of the increased interaction of product and resource markets across nations via trade, immigration, and foreign investment—that is, via international flows of goods and services, people, and investments in equipment, factories, stocks, and bonds. It also includes noneconomic elements such as culture and the environment. Simply put, globalization is political, technological, and cultural, as well as economic.

In terms of people's daily lives, globalization means that the residents of one country are more likely now than they were 50 years ago to consume the products of another country, invest in another country, earn income from other countries, talk by telephone to people in other countries, visit other countries, know that they are being affected by economic developments in other countries, and know about developments in other countries.

What forces are driving globalization?[1] The first and perhaps most profound influence is technological change. Since the industrial revolution of the late 1700s, technical innovations have led to an explosion in productivity and slashed transportation costs. The steam engine preceded the arrival of railways and the mechanization of a growing number of activities hitherto reliant on muscle power. Later discoveries and inventions such as electricity, telephone, automobile, container ships, and pipelines altered production, communication, and transportation in ways unimagined by earlier generations. More recently, rapid developments in computer information and communications technology have further shrunk the influence of time and geography on the capacity of individuals and enterprises to interact and transact around the world. For services, the rise of the Internet has been a major factor in falling communication costs and increased trade. As technical progress has extended the scope of what can be produced and where it can be produced, and advances in transport technology have continued to bring people and enterprises closer together, the boundary of tradable goods and services has been greatly extended.

Also, continuing liberalization of trade and investment has resulted from multilateral trade negotiations. For example, tariffs in industrial countries have come down from high double digits in the 1940s to about 4 percent by 2014. At the same time, most quotas on trade, except for those imposed for health, safety, or other public policy reasons, have been removed. Globalization has also been promoted through the widespread liberalization of investment transactions and the development of international financial markets. These factors have facilitated international trade through the greater availability and affordability of financing.

Lower trade barriers and financial liberalization have allowed more companies to globalize production structures through investment abroad that in turn has provided a further stimulus to trade. On the technology side, increased information flows and the greater tradability of goods and services have profoundly influenced production location decisions. Businesses are increasingly able to locate different components of their production processes in various countries and regions and still maintain a single corporate identity. As firms subcontract part of their production processes to their affiliates or other enterprises abroad, they transfer jobs, technologies, capital, and skills around the globe.

How significant is production sharing in world trade? Researchers have estimated production sharing levels by calculating the share of components and parts in world trade. They have concluded that global production sharing accounts for about 30 percent of the world trade in manufactured goods. Moreover, the trade in components and parts is growing significantly faster than the trade in finished products, highlighting the increasing interdependence of countries through production and trade.[2]

WAVES OF GLOBALIZATION

In the past two decades, there has been pronounced global economic interdependence. Economic interdependence occurs through trade, labor migration, and capital (investment) flows such as corporation stocks and government securities. Let us consider the major waves of globalization that have occurred in recent history.[3]

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[1] World Trade Organization, *Annual Report*, 1998, pp. 33–36.

[2] A. Yeats, *Just How Big Is Global Production Sharing?* World Bank, Policy Research Working Paper No. 1871, 1998, Washington, DC.

[3] This section draws from World Bank, *Globalization, Growth and Poverty: Building an Inclusive World Economy*, 2001.

TRADE CONFLICTS FEDERAL RESERVE POLICY INCITES GLOBAL BACKLASH

Economic interdependence is part of our daily lives. When domestic economic policies have spillover effects on the economies of other countries, policymakers must take these into account. This why major countries frequently meet to discuss the impacts of their policies on the world economy. Consider the effects of the Federal Reserve's policies on other economies as discussed below.

For decades, the Federal Reserve (Fed) has attempted to fulfill its mandate to promote full employment, price stability, and economic growth for the U.S. economy. Pursuing these objectives can impose adverse spillover effects on economies of other nations, as seen in the following example.

Facing a sluggish economy in 2010, the Fed enacted a controversial decision to pursue economic growth by purchasing $600 billion of U.S. Treasury bonds. The idea was to pump additional money into the economy that would cause long-term interest rates to fall. This would encourage Americans to spend more on investment and big ticket consumption items, thus stimulating the economy. However, critics doubted that the program would work and maintained that it might cause an increase in inflationary expectations that could destabilize the economy.

Also, the Fed's program was criticized by U.S. trading partners such as Germany and Brazil, as an attempt to improve American competitiveness at their expense. They noted that printing more dollars, or cutting U.S. interest tends to cause depreciation in the dollar's exchange value, that will be explained in Chapter 11 of this text. If the value of the dollar decreases, other countries' exports become more expensive for American consumers, thus reducing the amount of goods the United States imports from the rest of the world. The accompanying rise in the exchange value of other countries' currencies makes American goods cheaper for foreign consumers to purchase that should increase the amount of exports leaving the United States. This would benefit U.S. producers who would likely increase hiring to meet the increased production requirements of the increased global demand for their exports. What's more, the rest of the world's producers would see their exports fall, resulting in job losses for their workers. Producers in the United States would gain at the expense of producers abroad.

However, Federal Reserve officials challenged this argument by stating that the purpose of their program was not to push down the dollar in order to disadvantage America's trading partners. Instead, it was an attempt to grow the economy that is not just good for the United States, but for the world as a whole. A depreciation of the dollar was only a side effect of a growth oriented policy, not the purpose of the policy. This argument did not dampen the fears of foreigners regarding the Fed's monetary policy, and their criticism continued.

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First Wave of Globalization: 1870–1914

The first wave of global interdependence occurred from 1870 to 1914. The interdependence was sparked by decreases in tariff barriers and new technologies that resulted in declining transportation costs, such as the shift from sail to steamships and the advent of railways. The main agent that drove the process of globalization was how much muscle, horsepower, wind power, or later on, steam power a country had and how creatively it could deploy that power. This wave of globalization was largely driven by European and American businesses and individuals. Therefore, exports as a share of world income nearly doubled to about 8 percent while per capita incomes, which had risen by 0.5 percent per year in the previous 50 years, rose by an annual average of 1.3 percent. The countries that actively participated in globalization, such as the United States, became the richest countries in the world.

However, the first wave of globalization was brought to an end by World War I. Also, during the Great Depression of the 1930s, governments responded by practicing protectionism: a futile attempt to enact tariffs on imports to shift demand into their domestic markets, thus promoting sales for domestic companies and jobs for domestic workers.

For the world economy, increasing protectionism caused exports as a share of national income to fall to about 5 percent, thereby undoing 80 years of technological progress in transportation.

Second Wave of Globalization: 1945–1980

The horrors of the retreat into nationalism provided renewed incentive for internationalism following World War II. The result was a second wave of globalization that took place from 1945 to 1980. Falling transportation costs continued to foster increased trade. Nations persuaded governments to cooperate to decrease previously established trade barriers.

However, trade liberalization discriminated both in terms of which countries participated and which products were included. By 1980, trade between developed countries in manufactured goods had been largely freed of barriers. Barriers facing developing countries had been eliminated for only those agricultural products that did not compete with agriculture in developed countries. For manufactured goods, developing countries faced sizable barriers. For developed countries, the slashing of trade barriers between them greatly increased the exchange of manufactured goods, thus helping to raise the incomes of developed countries relative to the rest.

The second wave of globalization introduced a new kind of trade: rich country specialization in manufacturing niches that gained productivity through **agglomeration economies**. Increasingly, firms clustered together, some clusters produced the same product and others were connected by vertical linkages. Japanese auto companies, for example, became famous for insisting that their parts manufacturers locate within a short distance of the main assembly plant. For companies such as Toyota and Honda, this decision decreased the costs of transport, coordination, monitoring, and contracting. Although agglomeration economies benefit those in the clusters, they are bad news for those who are left out. A region can be uncompetitive simply because not enough firms have chosen to locate there. Thus, a divided world can emerge, in which a network of manufacturing firms is clustered in some high wage region, while wages in the remaining regions stay low. Firms will not shift to a new location until the discrepancy in production costs becomes sufficiently large to compensate for the loss of agglomeration economies.

During the second wave of globalization, most developing countries did not participate in the growth of global trade in manufacturing and services. The combination of continuing trade barriers in developed countries and unfavorable investment climates and antitrade policies in developing countries confined them to dependence on agricultural and natural resource products.

Although the second globalization wave succeeded in increasing per capita incomes within the developed countries, developing countries as a group were being left behind. World inequality fueled the developing countries' distrust of the existing international trading system that seemed to favor developed countries. Therefore, developing countries became increasingly vocal in their desire to be granted better access to developed country markets for manufactured goods and services, thus fostering additional jobs and rising incomes for their people.

Latest Wave of Globalization

The latest wave of globalization that began in about 1980 is distinctive. First, a large number of developing countries, such as China, India, and Brazil, broke into the world markets for manufacturers. Second, other developing countries became increasingly marginalized in the world economy and realized decreasing incomes and increasing poverty. Third, international capital movements, which were modest during the second wave of globalization, again became significant.

Of major significance for this wave of globalization is that some developing countries succeeded for the first time in harnessing their labor abundance to provide them with a competitive advantage in labor intensive manufacturing. Examples of developing countries that have shifted into manufacturing trade include Bangladesh, Malaysia, Turkey, Mexico, Hungary, Indonesia, Sri Lanka, Thailand, and the Philippines. This shift is partly because of tariff cuts that developed countries have made on imports of manufactured goods. Also, many developing countries liberalized barriers to foreign investment that encouraged firms such as Ford Motor Company to locate assembly plants within their borders. Moreover, technological progress in transportation and communications permitted developing countries to participate in international production networks. However, the dramatic increase in manufactured exports from developing countries has contributed to protectionist policies in developed countries. With so many developing countries emerging as important trading countries, reaching further agreements on multilateral trade liberalization has become more complicated.

Although the world has become more globalized in terms of international trade and capital flows compared to 100 years ago, there is less globalization in the world when it comes to labor flows. The United States had a very liberal immigration policy in the late 1800s and early 1900s and large numbers of people flowed into the country, primarily from Europe. As a large country with abundant room to absorb newcomers, the United States also attracted foreign investment throughout much of this period, which meant that high levels of migration went hand in hand with high and rising wages. However, since World War I, immigration has been a disputed topic in the United States, and restrictions on immigration have tightened. In contrast to the largely European immigration in the 1870–1914 globalization waves, contemporary immigration into the United States comes largely from Asia and Latin America.

Another aspect of the most recent wave of globalization is foreign outsourcing, when certain aspects of a product's manufacture are performed in more than one country. As travel and communication became easier in the 1970s and 1980s, manufacturing increasingly moved to wherever costs were the lowest. U.S. companies shifted the assembly of autos and the production of shoes, electronics, and toys to low wage developing countries. This shift resulted in job losses for blue collar workers producing these goods and cries for the passage of laws to restrict outsourcing.

When an American customer places an order online for a Hewlett-Packard (HP) laptop, the order is transmitted to Quanta Computer Inc. in Taiwan, China. To reduce labor costs, the company farms out production to workers in Shanghai, China. They combine parts from all over the world to assemble the laptop that is flown as freight to the United States, and then sent to the customer. About 95 percent of the HP laptop is outsourced to other countries. The outsourcing ratio is close to 100 percent for other U.S. computer producers including Dell, Apple, and Gateway. Table 1.1 shows how the HP laptop is put together by workers in many different countries/regions.

By the 2000s, the Information Age resulted in the foreign outsourcing of white collar work. Today, many companies' locations hardly matter. Work is connected through digitization, the Internet, and high speed data networks around the world. Companies can now send office work anywhere, and that means places like India, Ireland, and the Philippines where workers are paid much less than American workers. A new round of globalization is sending upscale jobs offshore, including accounting, chip design, engineering, basic research, and financial analysis as shown in Table 1.2. Analysts estimate that foreign outsourcing can allow companies to reduce costs of a given service from 30 to 50 percent.

TABLE 1.1

Manufacturing an HP Pavilion, ZD8000 Laptop Computer

Component	Major Manufacturing Country/Region
Hard disk drives	Singapore, China, Japan, United States
Power supplies	China
Magnesium casings	China
Memory chips	Germany, Taiwan, South Korea, Taiwan (China), United States
Liquid-crystal display	Japan, Taiwan, South Korea, China
Microprocessors	United States
Graphics processors	Designed in United States and Canada; produced in Taiwan

Source: From "The Laptop Trail," *The Wall Street Journal*, June 9, 2005, pp. B1 and B8.

TABLE 1.2

Globalization Goes White Collar

U.S. Company	Country	Type of Work Moving
Accenture	Philippines	Accounting, software, office work
Conseco	India	Insurance claim processing
Delta Air Lines	India, Philippines	Airline reservations, customer service
Fluor	Philippines	Architectural blueprints
General Electric	India	Finance, information technology
Intel	India	Chip design, tech support
Microsoft	China, India	Software design
Philips	China	Consumer electronics, R&D
Procter & Gamble	Philippines, China	Accounting, tech support

Source: From "Is Your Job Next?" *Business Week*, February 3, 2003, pp. 50–60.

Boeing uses aeronautics specialists in Russia to design luggage bins and wing parts for its jetliners. Having a master's degree or doctorate in math or aeronautics, these specialists are paid $700 per month in contrast to a monthly salary of $7,000 for an American counterpart. Similarly, engineers in China and India, earning $1,100 a month, develop chips for Texas Instruments and Intel; their American counterparts are paid $8,000 a month. However, companies are likely to keep crucial research and development and the bulk of office operations close to home. Many jobs cannot go anywhere because they require face-to-face contact with customers. Economists note that the vast majority of jobs in the United States consist of services such as retail, restaurants and hotels, personal care services, and the like. These services are necessarily produced and consumed locally, and cannot be sent offshore.

Besides saving money, foreign outsourcing can enable companies to do things they simply couldn't do before. A consumer products company in the United States found it impractical to chase down tardy customers buying less than $1,000 worth of goods. When this service was run in India, however, the cost dropped so much the company could profitably follow up on bills as low as $100.

Although the Internet makes it easier for U.S. companies to remain competitive in an increasingly brutal global marketplace, is foreign outsourcing good for white collar workers? A case can be made that Americans benefit from this process. In the last two decades, U.S. companies have imported hundreds of thousands of immigrants to ease engineering shortages. Now, by sending routine service and engineering tasks to nations with a surplus of educated workers, U.S. labor and capital can be shifted to higher value industries and cutting-edge research and development.

However, a question remains: What happens if displaced white collar workers cannot find greener pastures? The truth is that the rise of the global knowledge industry is so recent that most economists have not begun to figure out the implications. People in developing nations like India see foreign outsourcing as a bonus because it helps spread wealth from rich nations to poor nations. Among its many other virtues, the Internet might turn out to be a great equalizer. Outsourcing will be discussed at the end of Chapter 2.

TRADE CONFLICTS DIESEL ENGINES AND GAS TURBINES AS MOVERS OF GLOBALIZATION

When you consider internal combustion engines, you probably think about the one under the hood of your car or truck—the gasoline powered engine. Although this engine is good for moving you around, it is not adequate for moving large quantities of goods and people long distances; global transportation requires more massive engines.

What makes it possible for us to transport billions of tons of raw materials and manufactured goods from country to country? Why are we able to fly almost anywhere in the world in a Boeing or Airbus jetliner within twenty-four hours? Two notable technical innovations that have driven globalization are diesel engines, which power cargo ships, locomotives, and large trucks, and natural gas-fired turbines that power planes and other means of transportation.

The diesel engine was first developed to the point of commercial success by Rudolf Diesel in the 1890s. After graduating from Munich Polytechnic in Germany, Diesel became a refrigerator engineer, but his true love lay in engine design. He developed an engine that converted the chemical energy available in diesel fuel into mechanical energy that could power trucks, cargo ships, and so on. Today, more than 90 percent of global trade in manufactured goods and raw materials is transported with the use of diesel engines.

The natural gas-fired turbine is another driver of globalization. A gas turbine is a rotary engine that extracts energy from a flow of combustion gas. This energy produces a power thrust that sends an airplane into the sky. It also turns a shaft or a propeller that moves locomotives and ships. The gas turbine was invented by Frank Whittle, a British engineer, in the early 1900s. Although Wilbur and Orville Wright are the first fathers of flight, Whittle's influence on global air travel should not be underestimated.

These two engines, diesels and turbines, have become important movers of goods and people throughout the world. They have reduced transportation costs to such an extent that distance to the market is a much smaller factor affecting the location of manufacturers or the selection of the origin of imported raw materials. Indeed, neither international trade nor intercontinental flights would have realized such levels of speed, reliability, and affordability as have been achieved because of diesel engines and gas turbines. Although diesels and turbines have caused environmental problems, such as air and water pollution, these machines will likely not disappear soon.

Source: Vaclav Smil, *Prime Movers of Globalization*, MIT Press, Cambridge, Massachusetts, 2010 and Nick Schulz, "Engines of Commerce," *The Wall Street Journal*, December 1, 2010.

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WHY IS GLOBALIZATION IMPORTANT?

Because of trade, individuals, firms, regions, and nations can specialize in the production of things they do well and use the earnings from these activities to purchase from others those items for which they are high-cost producers. Therefore, trading partners can produce a larger joint output and achieve a higher standard of living than would otherwise be possible. Economists refer to this as the law of comparative advantage that will be further discussed in Chapter 2.

According to the **law of comparative advantage**, the citizens of each nation can gain by spending more of their time and resources doing those things where they have a relative advantage. If a good or service can be obtained more economically through trade, it makes sense to trade for it instead of producing it domestically. It is a mistake to focus on whether a good is going to be produced domestically or abroad. The central issue is how the available resources can be used to obtain each good at the lowest possible cost. When trading partners use more of their time and resources producing things they do best, they are able to produce a larger joint output that provides the source for mutual gain.

International trade also results in gains from the competitive process. Competition is essential to both innovation and efficient production. International competition helps keep domestic producers on their toes and provides them with a strong incentive to improve the quality of their products. Also, international trade usually weakens monopolies. As countries open their markets, their monopoly producers face competition from foreign firms.

With globalization and import competition, U.S. prices have decreased for many products like TV sets, toys, dishes, clothing, and so on. However, prices increased for many products untouched by globalization, such as cable TV, hospital services, sports tickets, rent, car repair and others. The gains from global markets are not restricted to goods traded internationally. They extend to such non-traded goods as houses that contain carpeting, wiring, and other inputs now facing greater international competition.

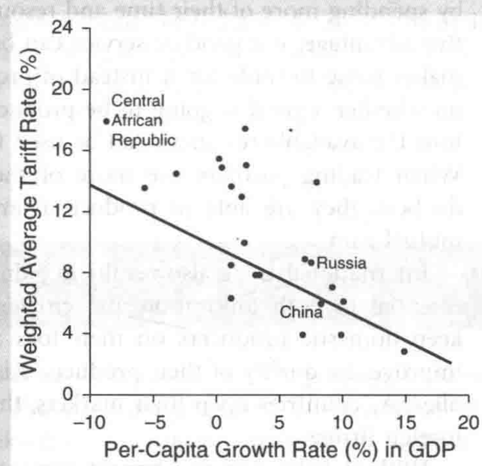
During the 1950s, General Motors (GM) was responsible for about 60 percent of all passenger cars produced in the United States. Although GM officials praised the firm's immense size for providing economies of scale in individual plant operations, skeptics were concerned about the monopoly power resulting from GM's dominance of the auto market. Some argued that GM should be divided into several independent companies to inject more competition into the market. Today, stiff foreign competition has resulted in GM's current share of the market to stand at less than 24 percent.

Not only do open economies have more competition, but they also have more firm turnover. Being exposed to competition around the globe can result in high-cost domestic producers exiting the market. If these firms are less productive than the remaining firms, then their exit represents productivity improvements for the industry. The increase in exits is only part of the adjustment. The other part is new firms entering the market unless there are significant barriers. With these new firms comes more labor market churning as workers formerly employed by obsolete firms must now find jobs in emerging ones. Inadequate education and training can make some workers unemployable for emerging firms creating new jobs that we often cannot yet imagine. This is probably the key reason why workers find globalization to be controversial. The higher turnover of firms is an important source of the dynamic benefits of globalization. In general, dying firms have falling productivity, and new firms tend to increase their productivity over time.

Economists have generally found that economic growth rates have a close relation to openness to trade, education, and communications infrastructure. Countries that open their economies to international trade tend to benefit from new technologies and other sources of economic growth. As Figure 1.1 shows, there appears to be some evidence of an inverse relation between the level of trade barriers and the economic growth of nations. Nations that maintain high barriers to trade tend to realize a low level of economic growth.

FIGURE 1.1

Tariff Barriers versus Economic Growth



The figure shows the weighted average tariff rate and per capita growth rate in GDP for 23 nations in 2002. According to the figure, there is evidence of an inverse relationship between the level of tariff barriers and the economic growth of nations.

Source: Data taken from The World Bank Group, *World Development Indicators*, available at http://www.worldbank.org/data/.

International trade can also provide stability for producers, as seen in the case of Invacare Corporation, an Ohio based manufacturer of wheelchairs and other health care equipment. For the wheelchairs it sells in Germany, the electronic controllers come from the firm's New Zealand factories; the design is largely American; and the final assembly is done in Germany with parts shipped from the United States, France, and the United Kingdom. By purchasing parts and components worldwide, Invacare can resist suppliers' efforts to increase prices for aluminum, steel, rubber, and other materials. By selling its products in 80 nations, Invacare can maintain a more stable workforce in Ohio than if it was completely dependent on the U.S. market. If sales decline anytime in the United States, Invacare has an ace up its sleeve—exports.

On the other hand, rapid growth in countries like India has helped to increase the demand for commodities like crude oil, copper, and steel. Thus, American consumers and companies pay higher prices for items like gasoline. Rising gasoline prices, in turn, have spurred governmental and private sector initiatives to increase the supply of gasoline substitutes like biodiesel or ethanol. Increased demand for these alternative forms of energy has helped to increase the price of soybeans and corn that are key inputs in the production of chicken, pork, beef, and other foodstuffs.

Moreover, globalization can make the domestic economy vulnerable to disturbances initiated overseas, as seen in the case of India. In response to India's agricultural crisis,