

# Globalization



Everyday Economics  
Federal Reserve Bank of Dallas



# Globalization

It is often said that the world is getting smaller. While the earth may not be shrinking in any physical sense, the people of the world are increasingly connected. Goods and services are traded across the globe. International financial markets allow investors to move vast sums of money from country to country in mere seconds, enabling companies to invest in business ventures in far-flung corners of the world. People leave their home country in search of opportunities found in foreign lands. All these connections are formed in a process called globalization. When used in an economic context, globalization is a complex means through which national resources become more and more internationally mobile while national economies become increasingly interdependent and integrated.

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## Early Connections

These connections are not new. Civilizations have traded throughout recorded history. Chinese and Islamic traders controlled the Silk Road that brought exotic goods over land to Europe. Near the end of the 15th century, the Spanish and Portuguese began to look for ocean routes to enter these lucrative trade markets. Columbus reached North America while searching for a westward route to Asia, and Vasco da Gama sailed around the Horn of Africa. During the three centuries that followed, European nations extended their reach around the world as they traded and colonized in Asia, Africa and the Americas. Technological advances in navigation such as improvements in rudder, compass and ship design made this reach possible.

The benefits from this period were not shared by all. Large companies, such as the British, Dutch and Portuguese East India companies, monopolized this trade. These firms controlled trade between Europe and the rest of the world. European nations established colonies that became critical markets for these nations to buy cheap resources and sell more expensive finished goods.

The trade and colonial policies of the Europeans were supported by a school of economic thought called mercantilism. Mercantilists believed that a nation's wealth and power could be enhanced by accumulating large stores of gold and silver by means of always exporting more goods than it imported. Although people of the world have interacted for centuries, many economic historians argue that these earlier periods of trade do not represent true globalization. Rather than seeking greater integration, nations protected their markets through colonies, monopolies and military conquests.

In 1776, Adam Smith challenged the assumptions of the mercantilists in his book *The Wealth of Nations*. He argued that nations should specialize in the production of certain goods and trade for other items. By doing so, the entire country could realize the same gains from efficiency that were found in a factory through division of labor. David Ricardo extended Smith's ideas with the concept of comparative advantage. These economists laid the foundation for a new school of economic thought that emphasized the benefits of free trade. It came to be called the classical school.

## First Era of Globalization

The 19th century witnessed dramatic innovations that allowed the first true era of globalization and integration to emerge. New technology reduced the obstacles and transportation costs created by distance between trading partners. More efficient and powerful oceangoing steamships reduced the time required to cross the seas, and new networks of railroad tracks enabled trains to move vast cargos over land. With the opening of the Suez Canal in 1869, ships could avoid the long and treacherous trip around Africa as they traveled from Europe to Asia. Travel time decreased, and the size of payloads increased. Communication was revolutionized as telegraph lines stretched under the ocean and connected North and South America to Europe, Asia, Australia and Africa.

At the same time, dramatic political developments opened world markets to trade. Britain unilaterally repealed its Corn Laws, tariffs on grains designed to protect domestic farmers. In Asia, American military forces led by Commodore Matthew C. Perry forced Japan to open its markets, and in the Opium Wars, a British victory caused China to open port cities to trade. At the end of the 19th century and the dawn of the 20th century, innovations in transportation and communication, as well as political developments, resulted in an unprecedented level of integration of the world's economies. However, as world output was reaching its highest level in history, a protectionist backlash in both Europe and the Americas began to take hold, and the network of connections and the resulting growth created by this first globalization did not last.

World War I and the difficult international relations that followed led to a period of isolationism in many

countries. Before international trade could recover, the Great Depression began, and countries responded by enacting a series of measures designed to protect domestic industries. These acts, often called beggar-thy-neighbor policies, sought to benefit a country at the expense of other nations. In the United States, passage of the Smoot-Hawley Tariff Act of 1930 had an enormous negative impact on international trade. By increasing the taxes on imported agricultural goods and a variety of other products, this act raised the average level of protection on imports to the U.S. to new heights. Other countries responded with their own new tariffs and protectionist policies. The result was a dramatic decrease in the level of world trade.

## Second Era of Globalization

After World War II, many leaders believed that economic interdependence would help maintain peace between nations. In the years following the war, nations agreed to multilateral trade negotiations. In 1947, the General Agreement on Tariffs and Trade (GATT) brought large groups of countries together to discuss reductions of various barriers between nations. Between 1947 and 1995, a series of GATT rounds, or multinational trade negotiations, resulted in major reductions in tariffs, quotas and other barriers to trade in goods and services. These negotiations involved 128 nations and served as a major force in this new wave of globalization. In 1995, GATT's functions were taken over by the World Trade Organization (WTO), an international body that administers trade laws and provides a forum for settling trade disputes among nations. Trade negotiations under the umbrella of GATT and WTO allowed the world to enter a second major era of globalization during the last half of the 20th century.

While these political developments set the foundation for a new era of globalization, technological



### Globalization Tidbits

1825

The **Erie Canal** connected Lake Erie and the Hudson River. Freight rates fell 90 percent compared with shipping by ox-drawn wagon. Midwestern farmers, loggers, miners and manufacturers could now access world markets from the Port of New York.

1830

The Liverpool and Manchester Railway opened as the world's **first intercity railroad**, connecting the mills around Manchester, England, with the Port of Liverpool.

# Fiber Optic Technology Has Revolutionized Communication

Optical fibers, long thin strands of glass about the diameter of a human hair, are bundled into cables and used to transmit light signals over long distances at rapid speed.



innovation drove the integration forward. Modern container ships carried enormous cargos around the world, and airplanes began to offer access to the most remote corners of the earth. These developments dramatically reduced the time and the cost of moving goods to new markets. Breakthroughs in communications were equally important. Computers, cell phones and the Internet revolutionized modern communication. Fiber optic networks circled the globe, and vast quantities of information began to move almost instantly between locations on opposite sides of the world. Multinational corporations used this communications network to manage production, delivery

and sales worldwide. Services once available only from local providers were now delivered from international producers to buyers throughout the world.

Both the first and the second eras of globalization originated in political developments and innovations in transportation and communication. But the level of integration achieved during the second era has been striking. This integration has three important facets that characterize the global marketplace: (1) the trade of goods and services, (2) the international flows of financial capital and investment, and (3) the movement of people and labor.

1837–38

## Electromagnetic telegraphs

were developed independently in England by Cooke and Wheatstone and in the U.S. by Morse and Vail.

1843

The steamship *Great Britain* was launched. The ship was the largest of its day and combined many new technologies as the first iron-clad ship to use a **steam engine** to power a screw propeller.

## Trade of Goods and Services

International trade of goods and services has played an essential part in this second era of globalization. Trade has increased in importance to the economies of many nations, and producers have marketed their goods and services worldwide. According to the World Bank, in just 40 years (from 1960 to 2000), the share of world production that was exported increased from 12 percent to 25 percent. Trade in the second half of the 20th century has been marked by dramatic increases in the trade of both goods and services.

### Trade of Goods Evolves

An incredible array of goods is traded between countries. Food and forestry products are among the many traded agricultural goods. Fuels and mining products from many nations are used by producers and consumers. These products include metals and ores, as well as fuels like crude oil and natural gas. The flow of manufactured goods between countries includes both intermediate goods and finished products. Steel used in factories around the world is produced in Europe, North America and Asia. Capital equipment used by businesses is bought and sold in a global market. Cranes and bulldozers move to construction sites far from the place of manufacture. Clothing, textiles and a host of other consumer goods travel internationally to their final destinations.

As new production methods have emerged, a new type of goods trade has become significant. In earlier periods, manufacturing processes were located in countries that had industrialized, and trade focused on importing raw materials and exporting finished products. Today, many different countries are involved in the production process. Various parts of many goods are produced in locations throughout the world and shipped to a final assembly plant.

As countries specialize in particular segments of the production process, trade in intermediate (or unfinished) goods has become an important part of international transactions. Simple items like pencils and complex products like airplanes contain components from multiple countries. A striking example is the Boeing 787 assembled in the United States near Seattle. Sections of the plane are built across the globe. Parts arrive in Washington from South Korea, Australia, Japan, Canada, the U.K., France, Sweden, Germany and Italy, as well as multiple states in the U.S. (See diagram on page 5.)

### Technology Spurs Services

While the increase in trade of goods is significant, the growth in trade of services has been remarkable. This growth can be attributed to the advancement in information and communication technologies, which have resulted in a wide range of services, from call center operations to sophisticated financial, engineering, legal, medical and entertainment services. Interestingly, foreign audiences often account for more than half of Hollywood's box-office revenues from movies, and American programmers design video games that are played all over the world.

Other examples of global trade of services abound. McDonald's and KFC might appear to be on every corner, but they have more restaurants abroad than in the U.S. American architects design office towers, airports and stadiums in China, Dubai, Canada and other foreign locales. International students enroll at American universities and create jobs for faculty and staff at the schools. American forensic experts investigate accidents and crimes around the globe. Foreign tourists visit the United States and create job opportunities at hotels, airlines and tourist attractions.

But globalization is more than trade—it includes the increased flow of money and people across national borders.

(Continued on page 8)

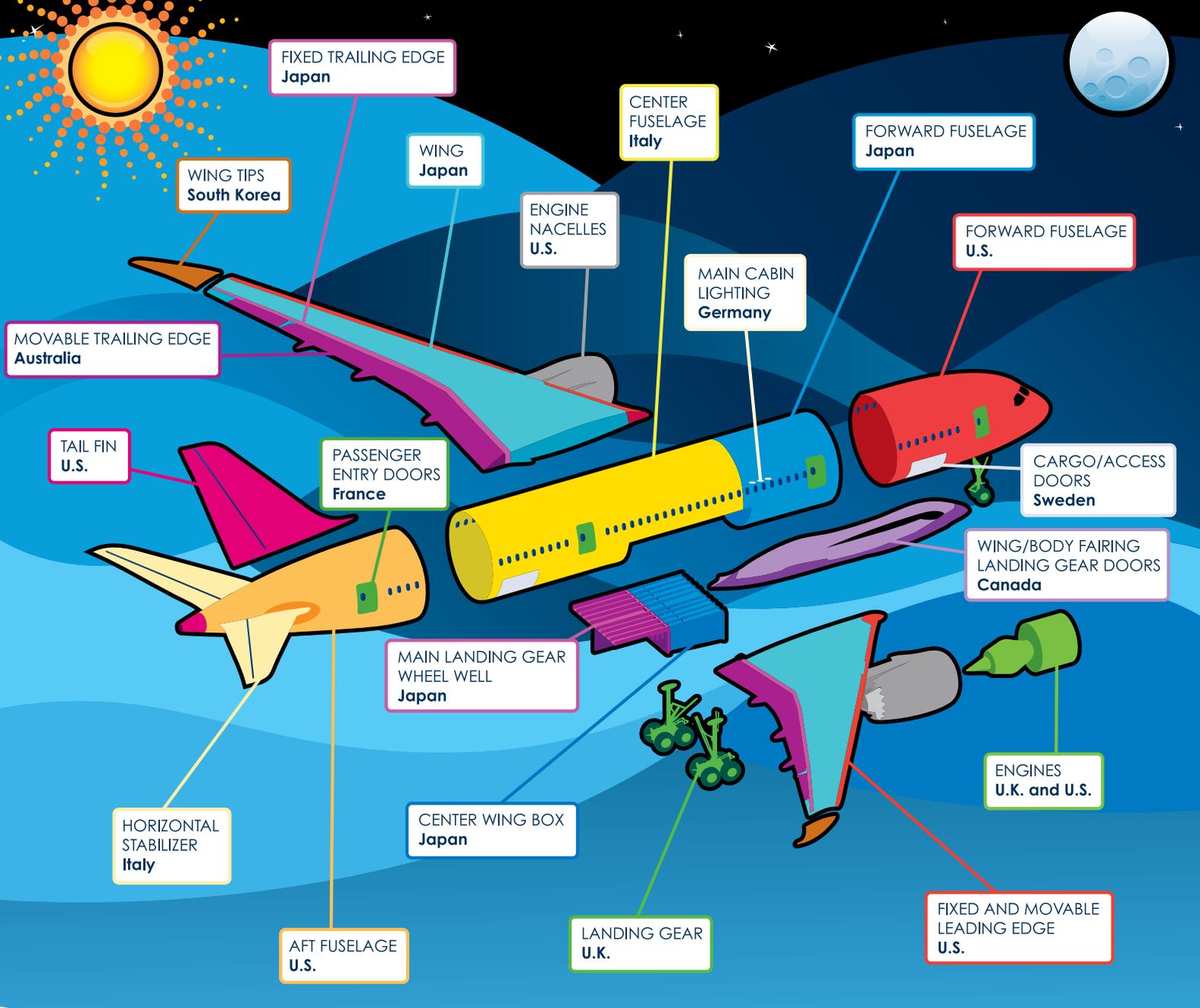
1858

The **first transatlantic telegraph cable** became operational. Queen Victoria and President James Buchanan exchanged messages to celebrate.

1869

The **Suez Canal** opened and linked the Mediterranean Sea and the Red Sea, dramatically reducing shipping distances between Europe and Asia.

# Boeing 787 — A Global Project



SOURCE: Boeing, [www.boeing.com/commercial/787family/dev\\_team.html](http://www.boeing.com/commercial/787family/dev_team.html), accessed June 2009.

**1876**

Alexander Graham Bell made the world's **first telephone call** when he said, "Mr. Watson, come here. I want to see you."

**1876**

The first mechanically **refrigerated ship** (the *Frigorifique*) sailed from Argentina to France carrying frozen meat, allowing the development of global agricultural markets.

# Explore the Concept...

## Foreign Currency Exchange

To buy foreign goods or services, or to invest in other countries, companies and individuals may need to first buy the currency of the country with which they are doing business. The price of one currency in terms of another is called an exchange rate.

For most of the 20th century, exchange rates were fixed using gold as the standard. Under the gold-exchange standard, governments guaranteed that currency could be exchanged for a specified amount of gold or gold-backed currency. By the early 1970s, this system was abandoned in favor of the floating exchange rates that exist today. Now, currencies rise and fall in value according to the forces of demand and supply.

These market forces drive the buying and selling of different currencies in the foreign exchange market. This vast market is global in scope and is active around the clock.

### Foreign Exchange Market

There are many different participants in the foreign exchange market. Each one has particular goals and objectives for involvement in the market:

- **Importers and exporters** are buying and selling goods and services around the world.
- **Investors** are investing in real assets (such as facilities or properties) and financial assets (such as stocks or bonds).

- **Speculators** are seeking to make a profit as the value of certain currencies rises or falls.
- **Central banks** are acting to affect the international value of their currency.

The currency of a growing economy with relative price stability and a wide variety of competitive goods and services will be more in demand than that of a country in political turmoil, with high inflation or with few marketable exports.

Money will flow to wherever it can get the highest return with the least risk. If a nation's financial instruments, such as stocks and bonds, offer relatively high rates of return at relatively low risk, foreigners will demand that nation's currency to invest in financial instruments.

Traders also speculate within the market about how different events will move the exchange rates. These speculators buy currency they expect will rise in value and sell currency they expect will fall in value.

### Foreign Exchange Rates

The exchange rate—the price of a currency in terms of another currency—is stated in two ways: as the amount of foreign currency required to purchase a single unit of domestic currency or as the amount of domestic currency required to purchase a single unit of foreign currency.

### An American in Paris

If the exchange rate is...

US\$1.00=€1 or €1.00=US\$1

US\$1.50=€1 or €0.67=US\$1

US\$2.00=€1 or €0.50=US\$1

To buy the €60 shirt,  
the American needs...

US\$60

US\$90

US\$120



Consider the example of the euro and the U.S. dollar. The exchange rate might be stated as 1.50 dollars = 1 euro. On the other hand, it could be stated that 0.67 euros = 1 dollar. These exchange rates are equivalent. If 1 dollar will buy 0.67 euros, each euro costs 1.50 dollars.

Many people experience the foreign exchange market when they travel to another country and want to buy something. Look at the tables below. An American shopping in Paris finds a shirt priced at 60 euros. To pay for the shirt in local currency, the American must exchange U.S. dollars for euros.

At an exchange rate of 1.50 dollars = 1 euro (or 0.67 euros = 1 dollar), the tourist will need to exchange almost 90 U.S. dollars for the 60 euros required to buy the shirt. But even if the price of the shirt stayed at 60 euros, the price paid by the American goes up or down as the exchange rate fluctuates.

If someone from Paris visits New York and wants to see a play on Broadway, the visitor will need to exchange euros for U.S. dollars. If the ticket costs 75 U.S. dollars and the exchange rate is still 0.67 euros = 1 dollar (or 1.50 dollars = 1 euro), the European will need to exchange 50 euros for the 75 U.S. dollars. Once again, movement in the exchange rate affects the price that the European pays, even if the ticket remains 75 U.S. dollars.

## Currency Strength

When a single dollar will buy more foreign currency (or it takes more foreign currency to buy a dollar), the dollar is described as strengthening, or appreciating.

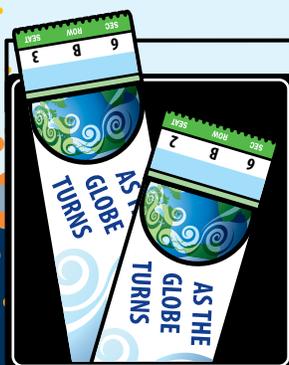
A stronger U.S. dollar means that:

- Americans can buy foreign goods more cheaply and U.S. imports will increase.
- Americans can travel abroad less expensively.
- Foreigners find U.S. goods more expensive and U.S. exports will fall.

When a single dollar will buy less foreign currency (or it takes less foreign currency to buy a dollar), the dollar is said to be weakening, or depreciating. A weaker U.S. dollar implies that:

- Foreigners can buy American goods more cheaply and U.S. exports will increase.
- Foreigners can travel to the U.S. less expensively.
- Foreign goods become more expensive for U.S. residents and demand for imports will fall.

Changes in the strength, or value, of a currency affect different sectors of the economy in different ways. Some sectors benefit, while others are harmed.



### A European on Broadway

If the exchange rate is...

€1.00=US\$1 or US\$1.00=€1

€0.67=US\$1 or US\$1.50=€1

€0.50=US\$1 or US\$2.00=€1

To buy the \$75 ticket, the European needs...

€75

€50

€37.50



## Making Global Tracks

This map shows the locations of four multinational corporations—Adidas, Ford, Honda and Nike—that have facilities throughout the world.

## Flow of Financial Capital

As firms compete to sell goods and services in the global marketplace, producers search the world to find the most cost-effective methods of production. Some companies import intermediate products from foreign firms, as is the case with the Boeing plane. Other firms locate their plants or production facilities in foreign countries. Rather than producing food in one plant and exporting it throughout the world, Kraft, based in the United States, and Nestlé, based in Switzerland, have built facilities around the world to serve a growing international customer base. Japanese and European car manufacturers have built enormous

plants in the United States, as U.S. automobile companies have built facilities in other countries. These firms are seeking both lowest-cost resources as inputs to production and freer access to global markets that comes from owning a plant in a given region.

Many firms build or buy physical capital such as buildings, tools and machinery in other parts of the world. Foreign direct investment refers to these capital expenditures and the money (or financial capital) that moves across international borders to pay for these assets. The end of the 20th century saw explosive growth in foreign direct investment. United Nations statistics show that the amount of invest-

1956

Transatlantic No. 1 (TAT-1), the **first transatlantic telephone cable** system, began service and carried more than 700 calls between London and North America in the first 24 hours.

1956

The *Ideal X* became the world's **first container ship** when it was modified to carry 58 containers from Newark, N.J., to the Port of Houston.

ment flowing into countries from outside of their borders rose from \$54 billion in 1980 to \$1.4 trillion in 2000. As a result of this international investment, a new type of business called the multinational, or transnational, corporation has emerged. These global companies own facilities and employ workers throughout the world.

In addition to foreign direct investment, investors have increasingly diversified their investment portfolios to include financial assets such as stocks and bonds that originate outside of the buyer's country of residence and are valued in a foreign currency. These investors might be banks, pension funds or private individuals seeking the highest return for their investments in both domestic and international financial markets. This type of global investment is called foreign portfolio investment. Foreign portfolio investment is somewhat different from foreign direct investment because the ownership of these financial assets does not imply a controlling interest or a majority stake in a foreign business.

Some fear that foreign portfolio investment can be volatile and lead to financial panics. When a company builds and owns a firm or a production facility in another country, the firm has made a longer-term commitment with the investment. This type of foreign direct investment is difficult to sell quickly; the types of financial assets associated with foreign portfolio investment can be sold almost instantly. At the first sign of economic downturn in a particular economy, international investors can sell off financial assets rapidly. This can result in a



## International Investment: Linking the World

International investments fall into four primary categories.



**Commercial loans**—loans generally initiated by banks to foreign businesses or governments.



**Official flows**—financial assistance that developed nations give to developing ones to help with their economic development.



**Foreign direct investment**—the purchase of a productive asset in a foreign country. Buying a company or constructing a new plant are examples of FDI. Because FDI involves controlling interest in the business and ownership of physical assets, it is not as easily traded as other types of investments.



**Foreign portfolio investment**—the purchase of financial assets such as foreign stocks, bonds and currencies in amounts that do not result in a controlling interest. FPI is easily traded and thus can be volatile.

1958

Airlines in the U.K. and U.S. began scheduled **trans-Atlantic jet service** between New York and European capitals in the same month.

1966

The *Fairland* sailed from the U.S. to the Netherlands with 236 containers on the **first international voyage of a container ship**.

dramatic fall in the country's financial markets and can worsen the downturn.

Foreign direct investment, foreign portfolio investment, and international trade in goods and services require a specialized financial market called the foreign exchange market, where currencies from around the world are bought and sold. This market allows multinational corporations to operate efficiently and companies to invest across the world. It allows consumers and businesses to buy goods and services from producers in any country. Investors who wish to buy financial assets that are valued in a currency other than their own must acquire that currency to complete the transaction.

For example, if Americans want to buy Japanese products, they must pay the Japanese firm with yen, the Japanese currency. In the foreign exchange market, Americans buy the necessary yen using U.S. dollars. This means Americans sell U.S. dollars to buy yen. On the other hand, Japanese who wish to buy stock in an American company must first buy U.S. dollars. To do so, they must sell yen. The number of U.S. dollars required to buy yen (or the number of yen required to buy a U.S. dollar) is called the exchange rate. (A more in-depth discussion of foreign currency exchange is presented on pages 6–7.)

The foreign exchange market is the largest financial market in the world, and it operates 24 hours a day. While most transactions can be accomplished electronically, trading is often centered in cities with a significant concentration of banks and other financial services. Important foreign exchange markets can be found in London, New York, Chicago and Tokyo, among others.

Another important channel of international monetary flows has been remittances by immigrants. A remittance is money that is sent by an individual to

family or friends in another country. Often, this money comes from immigrants who send money back to their country of origin. This is a significant source of money for some developing nations. In some cases, remittances from U.S. residents outpace foreign aid provided to that country by the U.S. government.

## Movement of People

The movement of people across national borders, sometimes referred to as migration, has long shaped the world. People have moved around the globe for centuries in search of opportunity, as well as safety and security.

People often leave one country and move to another in search of economic opportunity. During the first era of globalization, people moved from Europe, where labor was plentiful and opportunities were limited, to the United States, where a small labor force was matched with a rapidly growing economy and numerous jobs. In the second era of globalization, people have moved from countries of origin to growing economies around the world. Saudi Arabia and the United Arab Emirates employ significant numbers of workers from Egypt and India. Immigrants to the U.S. come from around the world, including Mexico and the nations of Europe. Many U.S. immigrants come from the Philippines, India and China. However, the size of these migrations is small compared with the levels seen at the end of the 19th century.

Other reasons for migration vary. Some people leave a country to escape a repressive political regime or a humanitarian crisis. Millions of students move to other countries seeking educational opportunities.

Whatever the motivation for the movement, migration has important effects on the economy and social structure of both the country of origin and the des-

1973

Martin Cooper of Motorola made the first public telephone call placed on a **portable cellular phone**. He called his rival at AT&T's Bell Labs from the streets of New York City.

1987

Walmart completed a **private satellite network** that linked stores, distribution centers and the corporate office with voice, data and video communication.



destination country. Emigration—the departure of both skilled and unskilled workers from their country of origin—can change the makeup of the labor force and affect wage rates and employment in their native country. Through immigration, new residents compete for jobs in a variety of fields and change the dynamics of the labor market in the destination country. As immigrants change the social structure in their new place of residence, opposition can emerge. Because of all these forces, immigration can become a politically charged topic. Throughout history, changes to the political landscape have had profound implications for immigration. Overall limits on immigration have been imposed at various points in history.

## Growth of Global Integration

Globalization has important political implications because a country's policies determine the level of interaction between a nation and the rest of the world. Restrictive immigration laws limit the movement of people. Trade policies such as tariffs or quotas restrict

the flow of goods and services between nations. Capital controls limit the amount of financial capital that moves across the globe. While a negative attitude toward globalization can impact a country's policies, the trend appears to be toward greater levels of integration.

In addition to the work of the World Trade Organization, which seeks to reduce tariffs around the world, smaller groups of nations have increased the level of integration with their neighbors. One such arrangement is the creation of a free trade area. This is an agreement between a group of countries to completely remove tariffs and other restrictive barriers on the flow of goods and services between those nations. An example is the North American Free Trade Agreement (NAFTA) between Canada, the United States and Mexico. As a result of this agreement, the three countries agreed to lower tariffs and other barriers on the flow of goods and services until they have been completely removed. The Association of Southeast Asian Nations (ASEAN) is also developing a free trade agreement between its member nations.

1990

Tim Berners-Lee and Robert Cailliau decided to name the new information-sharing system that they had developed the **World Wide Web**.

1995

The **Global Positioning System** (GPS) became fully operational, providing positioning, navigation and timing services to users around the world.

While free trade agreements can significantly increase the ties between nations, other types of agreements—such as those that allow the free movement of labor and capital across national borders—can also bind nations together. Since the end of World War II, most nations of Europe have moved toward greater integration of political and economic systems under a series of

agreements and treaties. In 1992, the Treaty on European Union was signed in Maastricht, Netherlands. The European Union moved the following year to implement a single market that is characterized by four freedoms: the free movement of goods, services, people and money. Many of the European Union nations have moved to a common currency, the euro, since 1999.



**I**n many ways, the globalization seen at the end of the 20th century marked a return to the integration experienced as the century began. The first era of globalization, with unprecedented levels of migration and trade, ended as the difficulties of World War I and the global economic downturn of the Great Depression severed ties between nations. While the last decades of the 20th century saw less migration between countries, the scope of other areas of integration was greater than ever. Innovations in the production process created new ways of manufacturing that greatly increased efficiency. Technological breakthroughs allowed trade of services to reach unprecedented levels. Multinational corporations and international capital flows linked the economies of the world ever more tightly.

But challenges to this level of global interdependence remain. The global economic crisis that began late in 2007 and intensified in 2008 created tremendous pressures on financial systems and significant loss of wealth worldwide. Although this crisis originated in the subprime mortgage market in the U.S., it quickly spread as many different assets that were owned by international investors rapidly lost value. The global integration of financial markets and the international ownership of financial assets prevented the crisis from being contained in the United States. In response to the global financial crisis and the associated recession in various countries, some called for new controls on international markets and increased protection for domestic producers. Policymakers began to consider ways to oversee global financial markets. The response to the crisis could have ramifications on the pace of integration and globalization for years to come.

# Great minds think about... globalization

**Jagdish Bhagwati** (1934– ) found that market distortions that result from trade and government trade policies can have significant effects on social welfare. He argued against protectionism and for a world trading system. In advocating worldwide free trade, he criticized regional trade agreements.

**Joseph Stiglitz** (1943– ) argued for the reform of global institutions, international trade agreements and intellectual property laws. He won the 2001 Nobel Prize for his analyses of markets with asymmetric information and applied those ideas to his studies of development economics and international public-sector regulation.

**Maurice Obstfeld** (1952– ) and **Kenneth Rogoff** (1953– ) developed an economic model that examined the impact of domestic monetary and fiscal policies on the economic welfare of a nation and its trading partners. They also studied the role of trade costs in international trade and found that transportation costs and tariffs, along with other legal or cultural barriers, can affect everything from consumer preferences to unexplained movements in exchange rates.

**Jeffrey Williamson** (1935– ) and **Kevin O'Rourke** (1963– ) sought to identify periods of globalization by comparing the domestic and world prices of goods and resources. They argued that as economies integrated and resources moved freely between nations, domestic prices would move toward world prices. So if labor could easily immigrate, wage differences between countries would be smaller.



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*Globalization* is part of the Everyday Economics series produced by Economic Education at the Federal Reserve Bank of Dallas.

## Economic Education Contacts

[dal.econed@dal.frb.org](mailto:dal.econed@dal.frb.org)

Dallas Fed Economic Education materials are available at [www.dallasfed.org/educate](http://www.dallasfed.org/educate).

Author  
**Princeton Williams**

Editor  
**Jennifer Afferbach**

Art Director and Illustrator  
**Darcy Taj**