Economic Interdependence

Globalization, the increasing integration and interdependence of domestic and overseas markets, has three sides: the good side, the bad side, and the ugly side.


**Essential Question:** How has growing economic interdependence changed spatial relationships among people in the world?

Few, if any, places in the world are independent any longer. Vast improvements in transportation and communications over the past few decades have linked people throughout the world. The political, cultural, and economic processes of each region are linked with those of other regions, resulting in a degree of global interdependence not seen before. But, as Panos Mourdoukoutas indicated, not everyone has been pleased with the results.

**Trade and Interdependence**

The Internet and worldwide TV coverage have increased what people can easily know about the resources and products available for trade in other regions. This, combined with improved transportation, has caused international trade to increase significantly.

**Complementarity and Comparative Advantage**

Trade occurs when one party desires a good or service that it does not have or cannot produce as efficiently as someone else can, and another party has the desired good or service and is willing to part with it. Trade sometimes occurs through barter, a system of exchange in which no money changes hands. This is most common between individuals. In the movie *To Kill a Mockingbird*, the main character, a lawyer, provides legal services to a poor farmer in exchange for bags of food. However, trade usually occurs with an exchange of money or credit.

Parties tend to trade goods or services in which each has a comparative advantage in producing. For example, climate and soil give farmers in Florida an advantage over farmers in Maine in growing oranges. But Maine farmers have an advantage in growing potatoes.
Trade between parties is even more attractive when complementarity exists—when both parties have goods or services that the other party desires. Sometimes complementarity does not exist, and the trade is heavily weighted in one direction. For example, the United States wants far more products made in China than China wants products made in the United States. This can create tension. In particular, the country with the trade deficit might see the relationship as favoring the other side.

**International Trade and Trading Blocs**

Globalization has resulted in increased international trade. Larger and faster ships, improvements to major canals such as the Panama and Suez Canals, new port facilities capable of handling larger ships, and increases in air cargo all made the transport of goods faster and less expensive. In the United States, trade increased from 5 percent of the total economy in 1960 to 13 percent in 2015. In China, over this period, it went from 4 percent to 22 percent.

Because of the increasing importance of trade, countries have strengthened their relationships with their most important trading partners. This has resulted in the formation of trading blocs, groups of countries that agree to a common set of trade rules. One of these is the North American Free Trade Agreement (NAFTA) between Canada, the United States, and Mexico, which took effect in 1994.

These agreements encourage and ease trade restrictions. The creation of the European Union (EU) has also allowed for the easy movement of goods among the member states. Members of these supranational organizations have much greater access to each other’s markets. Not only can goods move more easily between the member countries, but people, services, and capital can also usually move more easily among the member states than they could prior to the agreements.

**Manufacturing in NICs**

One aspect of globalization has been that companies have moved industrial production from highly developed countries to developing countries. The speed of phone and Internet communications means that decision makers of transnational corporations can easily maintain contact with the management of new processing plants in the developing world. The ease of transportation results in frequent travel between the head offices and the factories in the newly industrialized countries (NICs). The manufactured goods can also be easily shipped to markets in developed countries and the rest of the world.

**Consumption Patterns**

As countries become more prosperous, citizens consume goods and services increasingly rapidly. Many of the consumers in these countries have a high level of disposable income and, consequently, purchase a great deal. Most residents of developing countries do not have the same level of disposable income and
thus purchase only necessities. One of the wealthiest countries on Earth, the United States, consumes about one-fifth of all resources, although it includes only about one-twentieth of all people. Maps and charts of consumption, such as the one below, show the overwhelming significance of the developed world.

While the spatial pattern of consumption is strongly skewed towards the developed world, the environmental impact of the consumption is spread more broadly. Many natural resources used to manufacture goods are extracted and processed in the developing world and then consumed in the developed world. Consequently, problems with mining and manufacturing plague poor countries, but problems with use are more often found in wealthy countries.

Not only do citizens of developed countries consume many more resources on a daily basis than do citizens of developing countries, they also live considerably longer. As a result, over a person’s lifetime, the imbalance in resource use is even larger than it seems at first glance. For example, at current rates of consumption, in its lifetime a baby born in the United States will consume more than 200 times the energy resources as will a baby born in Bangladesh.

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**ENERGY CONSUMPTION AROUND THE WORLD**

<table>
<thead>
<tr>
<th>Energy Consumption per Person per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 250 million BTUs</td>
</tr>
<tr>
<td>150 to 249 million BTUs</td>
</tr>
<tr>
<td>75 to 149 million BTUs</td>
</tr>
<tr>
<td>Under 74 million BTUs</td>
</tr>
</tbody>
</table>

BTUs, or British Thermal Units, is a widely used measure of energy. One million BTUs equals about eight gallons of gasoline.

**Source:** World Bank, 2013.

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**The Impact of Global Financial Crises**

Increased interdependency links the economies of countries, for both better and worse. Growth in one country can result in new economic opportunities in other countries. For example, as China has gotten wealthier, it has purchased more grains and meat from U.S. farmers.
But an economic downturn in one country can lead to economic challenges elsewhere. When the price of oil dropped in mid-2014, consumers everywhere enjoyed lower gas prices, and manufacturers could produce goods at lower costs. However, economies in all oil-producing regions suffered. The effects were far-reaching and often acutely damaging:

- Oil companies lost revenue. For example, Royal Dutch Shell, based in the Netherlands, saw its earnings fall 80 percent from 2014 ($19 billion) to 2015 ($3.84 billion).
- Worldwide, about 250,000 workers lost their jobs. These included people in the field extracting oil but also workers for tanker firms or in ports around the world who were no longer needed by their companies.
- Governments in oil-dependent countries, such as Venezuela, lost tax revenue, forcing them to lay off public employees and reduce public services.
- Coal companies that could not compete with lower-cost oil reduced production, leading them to lay off workers.
- Energy industry investors saw significant losses as well. Share prices of energy companies plummeted alongside oil prices. In the second half of 2014, the 24 energy producers in the Fortune 500 lost a staggering $263 billion in market value.

The Changing Global Economy

Over the past several decades, automation has reduced the need for labor in manufacturing industries. At the same time, the spatial distribution of manufacturing is shifting. At the global scale, many companies have moved manufacturing plants from highly developed countries such as the United States to less-developed countries such as Indonesia and Vietnam. At the regional scale, factories in the United States have moved from the Northeast and Midwest to the Southeast and Southwest.

Outsourcing and Economic Restructuring

As part of globalization, transnational corporations, companies that operate in more than one country, have shifted manufacturing jobs away from the highly developed countries to the less-developed countries in order to increase profits. Corporations desire to pay lower wages—and a recognition that firms they compete with will also be attempting to pay lower wages—is an important factor. As a result, there is constant downward pressure on wages. Workers always face the possibility of losing their jobs to automation or to lower-wage workers in another country.

While workers may suffer from lower wages, consumers can benefit. When companies produce goods at lower cost, some of the savings might be passed along to consumers in the form of lower prices.
Companies may also save money by taking advantage of weaker laws protecting worker safety and the environment in newly industrializing countries, and they may receive government incentives such as tax breaks to relocate there. However, transportation costs are likely to increase because the main markets for manufactured products usually remain in wealthier countries. Globalization has created a new international division of labor, a system of employment in the various economic sectors spread throughout the world:

- Core countries such as the United States and Germany have rapidly increasing quaternary sectors that emphasize research and development.
- Middle income countries such as China, Mexico, and Indonesia usually manufacture goods that are developed in the highly developed countries.
- The least developed countries have large primary sectors and may export minerals and resources used in the production process.

Weak laws also affect non-industrial sectors. The Cayman Islands in the Caribbean Sea made itself a global center for the investment industry through its low taxes and lax regulation of this business. Other countries profit greatly through trade in cocaine, heroin, or other illegal drugs.

**Transnationals and Export Processing Zones**

Many governments in the developing world offer incentives to attract manufacturing jobs. One common technique used in over 100 countries is the creation of export processing zones (EPZs). These are physical spaces within a country where special regulations benefit foreign-controlled businesses. These zones are known by different names in different countries: **maquiladoras** in Mexico, free zones in Dominican Republic, and special economic zones in China. They are often situated near international airports, seaports, or land borders from where the products can be exported easily.
One incentive that countries use in EPZs is tax breaks. Transnationals typically do not pay taxes on the machinery and raw materials they import into an EPZ as long as these items are used to make products for export. This regulation protects existing businesses that cater to the local market. For example, if a resident entrepreneur employs 20 people producing T-shirts to sell locally, the new T-shirt factory in the EPZ will not drive the resident owner out of business with cheaper products. The country hopes that existing jobs in the locally owned factory will remain in addition to the jobs added in the foreign-owned factory.

**Ethics and Societal Changes Related to EPZs**

People disagree about whether EPZs are ethical. Critics charge that the transnationals are taking advantage of the workers and paying them a fraction of what they would pay workers in their home countries. Proponents of EPZs believe that the wages are reasonable for the region and thousands of people, mainly women, have access to paid employment at better wages than would otherwise be available to them. In addition, low wages keep the cost of items manufactured low, which allows lower-income people to purchase them.

EPZs and the employment of women in general can make significant changes on the status of women in their society. As women earn wages, they become less dependent upon men. As a result, women find that their concerns are more likely to be heard by their partners and governments. In addition, birth rates decline as more women gain employment.

**The Postindustrial Landscape**

As the types of economic activities that exist in a region evolve, so does the economic landscape. Many wealthier countries now have a postindustrial economy, one that no longer employs large numbers of people in factories. Most people are providing services and processing information. The shift from an industrial to a postindustrial economy changes the landscape of a country.

**The Fate of Brownfields**

The stereotyped image of a postindustrial landscape is one of deteriorating buildings surrounded by weeds and marked by broken or boarded-up windows and rusting metal. These sites of abandoned factories are known as brownfields. Because of the rusting metal, the region of the United States hit hardest by deindustrialization, the Northeast and lands around the Great Lakes, is often called the Rust Belt. In reality, old buildings are usually torn down, so brownfields are often empty.

However, if the factory building remains structurally solid, an entrepreneur might renovate it for a new use and keep enough of its exterior so that people know the building's history. People have converted old factories into apartments, restaurants, recreational facilities, and artisan boutiques. In central
Iowa, Grinnell College now has many of its offices in a building that once manufactured gloves.

If the factories have been torn down and the land cleaned of debris and pollution, the land might be converted to new uses such as a park, a housing development, or a shopping mall. If no memorial indicates the former use of the land, newcomers to the area might not realize the site was used for a factory.

In most communities that have experienced factory closures, the affected landscape includes far more than the former industrial site. Unless the community successfully replaced the lost manufacturing jobs, much of the community may show signs of decline. Because many people will have moved away from the area seeking employment and many of those who have stayed remain unemployed or have much lower-paying jobs, there are often many abandoned stores and homes. And as tax revenues shrink, public buildings and parks might also show signs of neglect.

**Corporate Parks and Campuses**

It is not just the existence, removal, or repurposing of old factories that typifies a postindustrial landscape. New jobs that are created also help to shape the postindustrial landscape. As a result of this growth, office buildings and other commercial spaces are more likely to be evident on the landscape. Increasingly, these office buildings congregate in corporate parks or business parks.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Corporate Parks</th>
<th>Industrial Parks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of Tract</strong></td>
<td>Large</td>
<td>Large</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Edges of communities where land is inexpensive and near residential areas</td>
<td>Edges of communities where land is inexpensive and near residential areas</td>
</tr>
<tr>
<td><strong>Buildings</strong></td>
<td>Low-rise office buildings</td>
<td>Large factories or warehouses</td>
</tr>
<tr>
<td><strong>Roads</strong></td>
<td>Designed for cars: small and can be curvy</td>
<td>Designed for trucks: wide and straight</td>
</tr>
<tr>
<td><strong>Grounds</strong></td>
<td>Park-like: spacious lawns, sidewalks, walking trails, sitting areas</td>
<td>Very functional</td>
</tr>
</tbody>
</table>

Some very large corporations create their own corporate parks where they are the only tenant. Samsung has its headquarters, known as Samsung Digital City, in a park 13 miles south of Seoul, South Korea. The campus covers an area about equal to 40 city blocks. About 35,000 people work there, and it includes 135 buildings, of which four are large office towers. Other facilities include research laboratories, gymnasiums, swimming pools, medical offices, a heliport, daycare facilities, and housing for guests and visiting employees.
Technopoles

Just as agglomeration economies can encourage the spatial grouping of manufacturing plants, the same principles can apply to technology companies. A technopole is a hub for information-based industry and high-tech manufacturing. It allows for benefits such as the possible sharing of certain services and attracting highly skilled workers to the area. Often these technopoles are located near universities well known for their computer, mathematics, engineering, science, and entrepreneurial business faculties:

- Silicon Valley, with the University of California, Berkeley, and Stanford University campuses nearby, is perhaps the most famous technopole.
- Harvard University and the Massachusetts Institute of Technology have acted as a catalyst for the development of the Route 128 high technology corridor near Boston.
- The Research Triangle in North Carolina developed because of three major research universities: Duke University, North Carolina State University, and the University of North Carolina, Chapel Hill.
- A smaller-scale technopole, the Technology Triangle near the University of Waterloo and the University of Guelph in Ontario, Canada, is a very important economic stimulus to much of southern Ontario.

Economic Growth Because of the economic stimulus associated with the technopoles, they can be called growth poles or growth centers. The concentration of high-value economic development in the growth pole attracts even more economic development. Once the process starts, the cumulative causation effect means it tends to feed upon itself. Each time new businesses are attracted to the growth pole, the “magnet” becomes even stronger and attracts still more businesses.

Desired Side-Effects Economic planners promoting a growth pole policy hope that it will have spin-off benefits, positive outcomes in addition to the main outcome. Spin-offs can help communities far beyond the growth pole itself. For example, farmers a hundred miles away from the pole should have expanded markets in which to sell their produce, resulting in increased sales and profits.

Unwanted Side-Effects The possible downsides of growth poles are the backwash effects. One of these is the loss of the highly educated young people from distant communities as they migrate to the growth pole for employment. As a result, the distant communities might suffer depopulation, loss of tax revenue, and the closure of various services. These changes can be detrimental for a community. This is an ongoing issue in many countries. In China, the impressive growth in prosperity for people in large urban areas in the eastern part of the country has pulled in people from rural areas in the west. One backwash effect of this has been that the rural western areas sometimes face a shortage of working age people and people to take care of elderly family members.
Government Development Initiatives

Because of the desire for economic development, governments at all levels provide various incentives to encourage the expansion of existing economic activities or the creation of new ones. Depending upon the nature of the economic development and what level of government is supporting the development, the type of incentive may vary. In most cases, the government providing the incentives insists that the company receiving the incentive must achieve certain targets such as providing a certain number of full-time jobs. The common incentives used to stimulate economic development are described in the table below.

<table>
<thead>
<tr>
<th>Type of Incentive</th>
<th>What Businesses Receive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Breaks</td>
<td>• A tax holiday (a temporary exemption from some taxes)</td>
</tr>
<tr>
<td></td>
<td>• A tax break for money invested in research and development</td>
</tr>
<tr>
<td>Loans</td>
<td>• Forgivable loans</td>
</tr>
<tr>
<td></td>
<td>• Money to borrow at below-normal interest rates</td>
</tr>
<tr>
<td>Direct Assistance</td>
<td>• The use of land or buildings free of charge</td>
</tr>
<tr>
<td></td>
<td>• Infrastructure such as roads and sewers paid for by government</td>
</tr>
<tr>
<td></td>
<td>• A subsidy for each full-time job created</td>
</tr>
<tr>
<td>Changes in Regulations</td>
<td>• Legislation that weakens unions</td>
</tr>
<tr>
<td></td>
<td>• Legislation that reduces environmental rules</td>
</tr>
</tbody>
</table>

Throughout most of U.S. history, government efforts to promote economic growth have been controversial. In the nineteenth century, the debate over the proper role of government reflected strong regional differences. Compared to the states in the South, states in New England and the Midwest supported more active government:

• At a national scale, New England and the Midwest supported high tariffs to fund government construction of roads, canals, and harbors, and to subsidize construction of railroads.
• At the local scale, citizens of New England and the Midwest supported higher taxes to pay for local transportation projects and, most importantly, public schools.
**GEOGRAPHIC PERSPECTIVES: THE GLOBAL DISTRIBUTION OF INCOME**

The distribution of income draws the attention of many scholars—economists, historians, sociologists, and others. Geographers focus on how wealth and income are distributed through space.

**Africa and South America**

While some African states have growing economies, average incomes remain low compared with most developed countries. South America has had uneven economic growth in the past two decades, often not enough to match its population growth.

**Asia**

The largest income gains in recent decades have been in Asia. South Korea, Hong Kong, and Singapore have transformed themselves from lands of grinding poverty to lands of relative comfort in less than a century. However, the really big increases in the size of the middle class have occurred in two enormous countries: China and India.

**North America and Europe**

North America and Europe have been relatively prosperous over the past century. However, middle-class incomes have stagnated in recent decades. As a result, income inequality, particularly in the United States, has increased.

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**GDP BY CONTINENT, 2016**

<table>
<thead>
<tr>
<th>Continent</th>
<th>GDP (in trillions of U.S. dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>$24.3</td>
</tr>
<tr>
<td>North America</td>
<td>$21.7</td>
</tr>
<tr>
<td>Europe</td>
<td>$19.1</td>
</tr>
<tr>
<td>S. America</td>
<td>$3.6</td>
</tr>
<tr>
<td>Africa</td>
<td>$2.2</td>
</tr>
<tr>
<td>Oceania</td>
<td>$1.4</td>
</tr>
</tbody>
</table>

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**KEY TERMS**

- barter
- complementarity
- trading blocs
- newly industrialized countries
- transnational corporations
- new international division of labor
- Export Processing Zone (EPZ)
- maquiladoras
- postindustrial brownfields
- Rust Belt
- corporate park or business park
- technopoles
- growth poles or growth centers
- spin-off benefits
- backwash effects