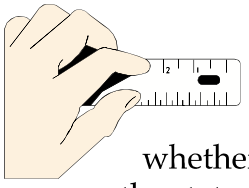
## Introduction



Economists analyze the health of the economy by using certain tools or measurements. The **gross domestic product** (**GDP**), **gross personal income** (**GPI**), and the **consumer price index** (**CPI**) measure whether the economy is growing or shrinking. Knowledge of the state of the economy helps the government, industry, and consumers plan strategies for maintaining or improving the rate of economic growth. Unemployment is another very important indicator in understanding the economic growth rate—just ask anyone who is out of work and looking for a job. To reduce high unemployment rates, economists use economic measuring tools first to research the state of the economy and then to offer solutions.

## Three Tools for Measuring Economic Growth: Gross Domestic Product, Gross Personal Income, and Consumer Price Index

### Gross Domestic Product (GDP): Measuring the Quantity of Goods and Services a Country Produces

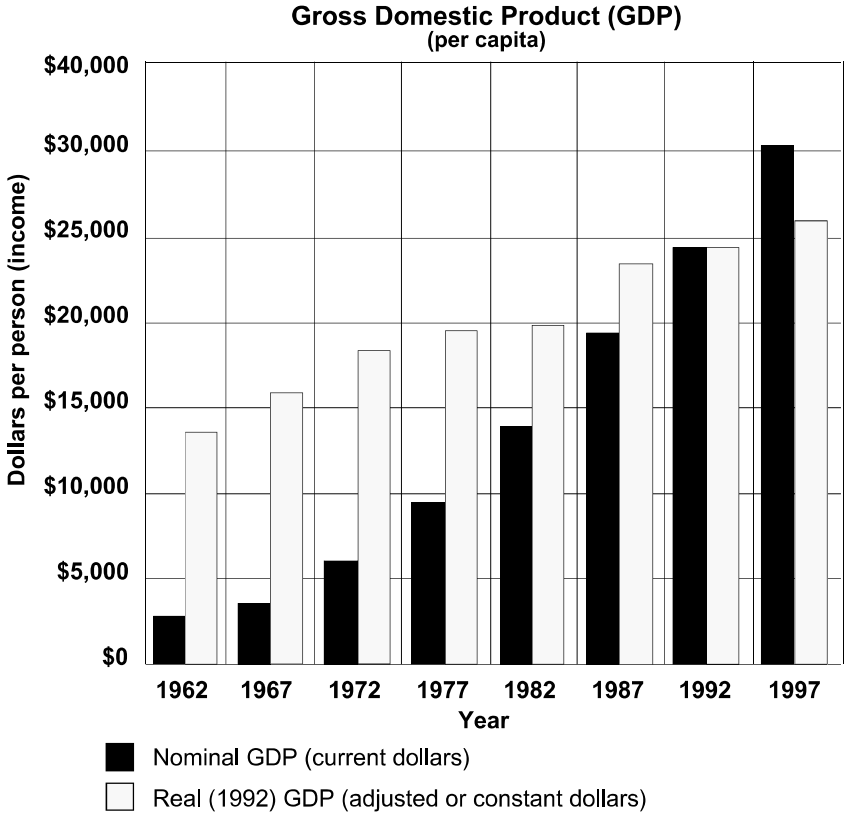
The gross domestic product is the most important measurement of economic growth. The *GDP*, as it is most often called, is the measurement of the total dollar value of all final or finished goods and services produced in a country within one year *within a nation's borders* by whoever produces them. Beginning in November of 1991, the United States Department of Commerce switched emphasis to GDP from the **gross national product** (**GNP**). The GNP is the measurement of the total dollar value of all finished goods and services produced in one year by a nation's residents *no matter where they are located*. The shift reflects that the GDP has become more closely related to changes in economic factors, such as unemployment.

The United States government gathers figures for the GDP from leading corporations and small businesses. Some of the important documents the government uses to gather this data are sales tax reports by small businesses, corporate financial statements, and business tax reports. When gathering data for this report, the government must be certain to include only the final cost of goods and services produced. It would not be accurate to add the cost of bricks, wood, cement, and shingles, as well as

the final selling price of a house, in calculating the value of a home. To include both figures would double the true wealth actually created in the production of a house.

The GDP would also not be an accurate measurement of the country's wealth if economists did not distinguish between growth and **inflation**. Growth is a real indicator of wealth. Inflation, on the other hand, only shows an increase in the price for goods and services, not an increase in the production of those goods and services.

The GDP that has *not* been adjusted for inflation is called the *nominal GDP*. The *nominal* GDP is reported in *current* dollars. The GDP that *has* been adjusted for inflation is called the *adjusted GDP* or *real GDP*. The *adjusted* GDP is listed in *constant* dollars.



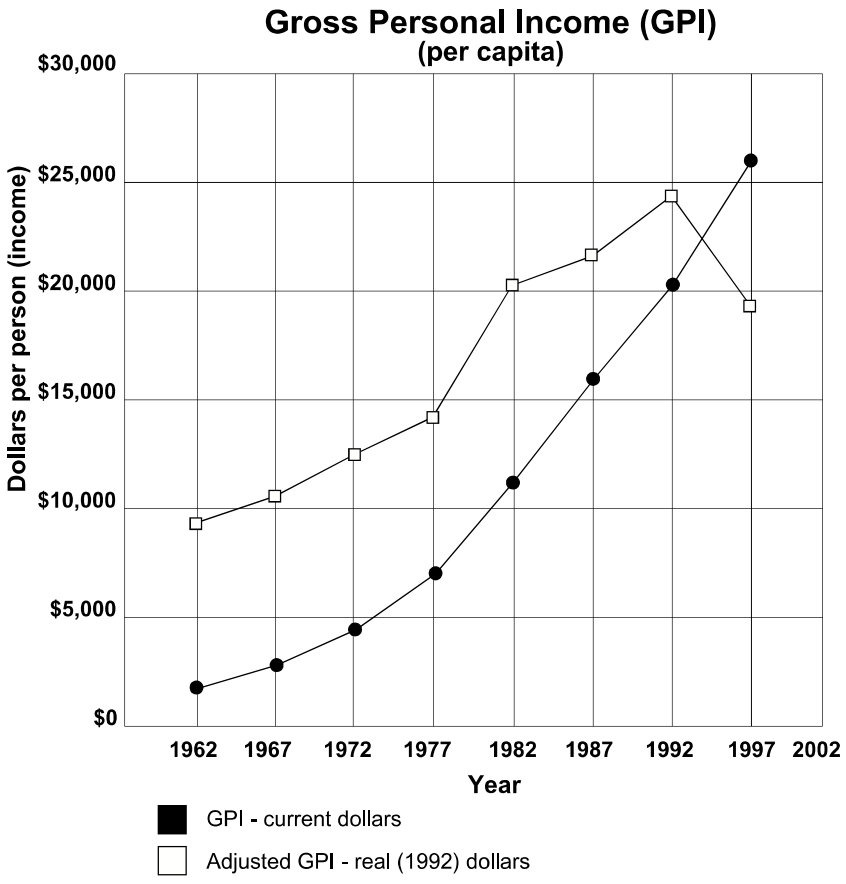

Source: U.S. Bureau of Economic Analysis.

The graph above also illustrates the importance of distinguishing between the nominal GDP and the adjusted GDP. The billion-dollar difference shown in 1997 between the nominal and real GDP is all inflation.

The *per capita* GDP, or gross domestic product per person, is a statistic calculated by dividing the GDP by the population of the country. When a country experiences an increase in its *per capita* GDP, its economy is usually growing, and its people are increasing their ability to buy the goods and services they desire.

### Gross Personal Income (GPI): Measuring the Amount of Money People Earn

Using the figures from the GDP and adding such important figures as gross personal income (GPI), or the amount of money earned by all Americans, an additional set of measurements can be made of the country's economic growth and economic stability.




Source: U.S. Bureau of Economic Analysis.

The graph above on the *per capita* GPI and adjusted personal income is an indication of the average person's ability to buy goods and services. In periods of **prosperity**, personal income will increase greatly. Periods of

**recession** or **depression** will show a drop in personal income, with an accompanying inability to buy goods and services.

*Net personal income* or **disposable personal income** is a measurement of how much money people have after paying their taxes. The more money people have after paying their taxes, the more goods and services they can buy. Money taken from income in the form of taxes is used for spending by our federal, state, and local governments. For example, in 1997 the average person's GPI was $25,660, while his or her disposable income was $20,478. The difference was money taken in the form of taxes.

**Consumer Price Index (CPI): A Measurement of the Changes in Prices of Products Commonly Purchased by Most Consumers**

Suppose you wanted to know how the price of a new car has changed or will change. In 2000 the new car costs $15,000 and in 2001 the price is $16,500.

$$\text{percentage change in price} = \frac{\$16,500 - \$15,000}{\$15,000} \times 100$$

$$\text{percentage change in price} = \frac{\$1,500}{\$15,000} \times 100$$

$$\text{percentage change in price} = 10\%$$

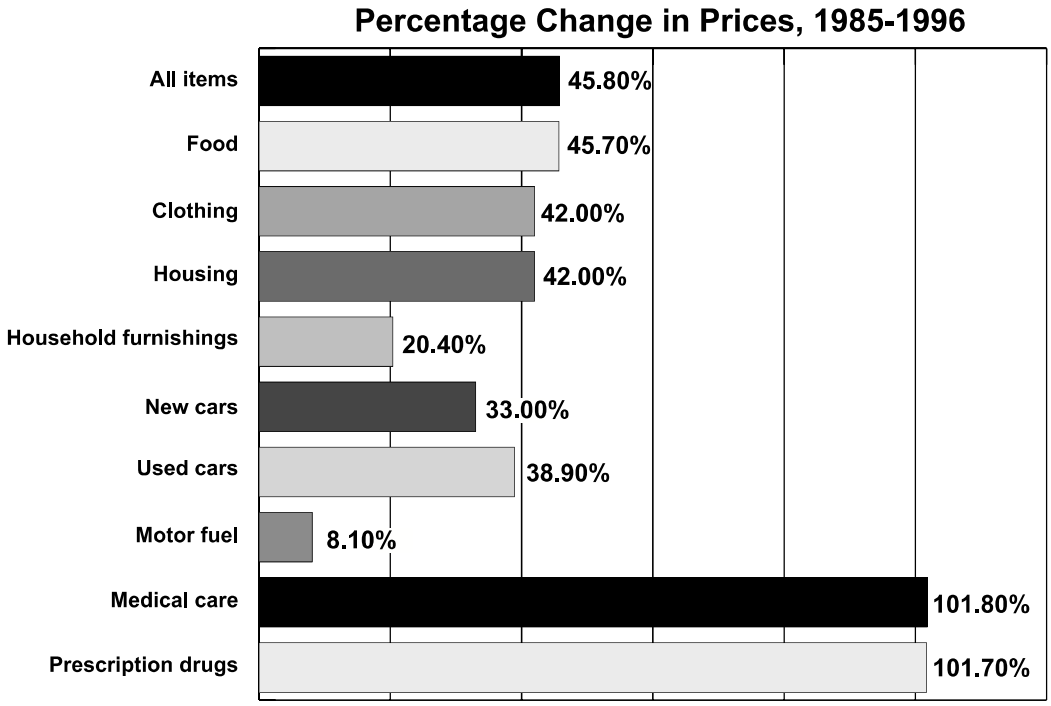
Ten percent would be the percentage increase in a single price (of the car) from one year to the next. However, economists are more interested in what has happened to prices in general than what has happened to a single price.

Economists compute a *price index*, which is a measure of the average level of prices. The CPI is calculated by the United States Bureau of Labor Statistics. The Bureau samples thousands of households to determine what consumers have paid for a representative group of goods known as the *market basket*. This cost is compared with the same market basket in 1982-1984.

The CPI is a measurement of the changes in the cost of living. The *cost of living* is really a phrase to describe what it costs for a person to buy those goods that he or she either needs to buy in order to live or wants to buy in order to live a pleasant lifestyle.

You have seen the grocery store ads in which one store claims that its prices are cheaper than another store's prices. Its ads show you a shopping cart full of food from both stores with a price tag on each shopping cart. The grocery store then claims that its prices for the same shopping cart full of goods are cheaper than those of a rival store.

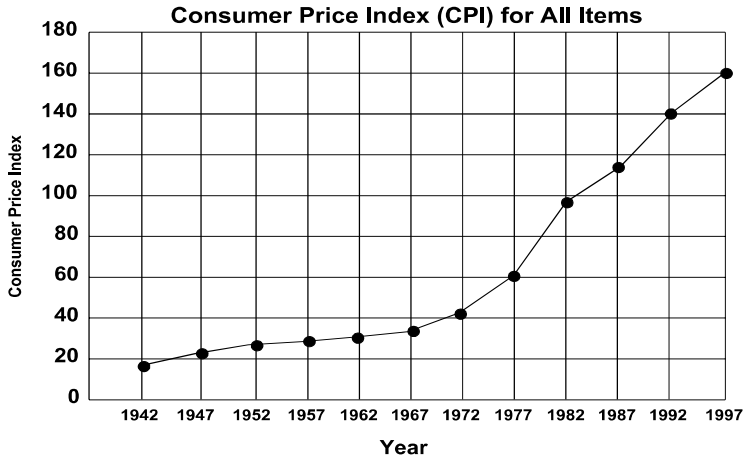
The CPI also looks at a variety of goods and calculates their cost. However, instead of comparing grocery store shopping carts full of goods, the government figures out the cost of 400 goods frequently bought by consumers. The CPI is figured by comparing what those goods would have cost in one year to what they would cost in another. See the graph below of the percentage change in prices of selected goods from 1985-1996.




Source: U.S. Bureau of the Census.

The CPI compares the current price of goods with prices of goods for the index period—the years 1982–84. The CPI assigns the value of 100 to the price of goods in the index period. For example, note that in the graph below, the index of 160.5 in 1997 for all goods means that, compared to the index period of 1982–84, the average price of goods has increased by 60.5 percent. When the CPI is compared against another year, we can determine its increase. For example, in the United States in 1996, the CPI was 156.9. One year later in 1997, the CPI was 160.5. By using the CPI and gross personal income (GPI statistics), the government can predict which consumers will be able to buy desired goods and services.

The CPI is not a perfect measurement of the changes in the cost of living. A higher CPI is not able to reflect the often better quality of today's television sets, automobiles, and other goods. So although consumers may be paying more, they may also be getting more for their money. In some cases, goods have gone down in cost, both in nominal and relative cost, because increases in technology have lowered the cost of making some goods. Computers and calculators are examples of goods that can be manufactured more cheaply in 2000 than in the years 1982-84.




(Current prices of goods are compared with prices of goods for the index period of years 1982-1984.)

Source: Bureau of Labor Statistics.

## Interdependence: Connections between People and Nations

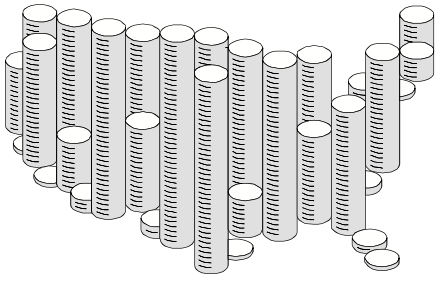
Economies are made up of people buying and selling goods and services. At the local level, you may buy farm produce grown at a nearby farm. This kind of transaction was the most common type before new methods of transportation connected distant cities in the 20th century. As these means of transportation—railroads, trucks, ships, and planes—bridged great distances, ways of buying and selling began to change. Florida orange growers began to ship their produce to people in Iowa who desired fresh citrus. And Iowa farmers began shipping their corn to Florida for Floridians to enjoy.

Entrepreneurs built factories along rivers in cities. These factories produced steel, rubber, paint, and many other products. Steel manufactured in Pittsburgh was transported to Detroit for use in automobiles. Paint produced in Cleveland was shipped all over the country for builders to use on houses and skyscrapers. Over time, the country became a giant web: Both raw materials and finished goods were shipped from one city or town to another. People in the South became dependent on the North for automobiles and steel. And people in the North became dependent on the South for citrus, cotton, and pecans.

Today this giant web includes more than just the United States. **Interdependence** and **international trade** have developed between most of the nations in the world. Much of the coffee that Americans begin their day with is grown in Brazil. Some of the wool in our sweaters comes from Australia. Many of our televisions, sound systems, and computers come from Japan. Silk is shipped from China, and cotton is imported from India.

The United States sells many goods and raw materials to these and other countries throughout the world. Much of the wheat grown in the Great Plains is shipped to Asia and Europe. Steel is exported to Great Britain.

The list of **imports** and **exports** goes on and on. One thing you can be sure of is that most of the goods you own were made someplace else—in another city, state, or country—and shipped to your city. And if you live in a manufacturing or agricultural area, most of what is produced in your locale is transported someplace else.

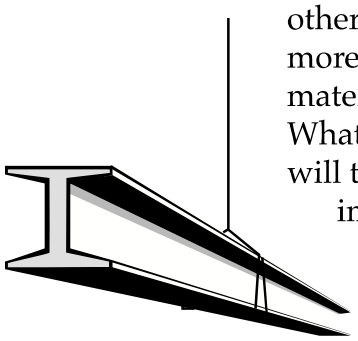


**Comparative Advantage: Nations Trade What They Make Most Cheaply**

Why does Great Britain use its capital resources to manufacture cloth? Why do Japan and Germany produce electronic equipment? And why does the United States manufacture steel, paint, and aircraft?

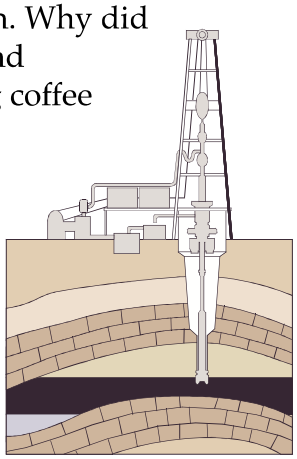
In many cases, a country will grow products, manufacture goods, or harvest raw materials that give it a **comparative advantage**. Simply put, countries often trade those products they can produce more efficiently or more cheaply than other countries. For example, the United States produces steel and aircraft because it can do so more cheaply than most other countries. Some of the resources once used to produce other goods—such as cloth—have been shifted to the steel and aircraft industries.

But the United States can also produce other products, such as cloth, more cheaply than many other countries. Why, one might ask, would the United States shift some of its resources from the production of cloth to the production of steel? The answer is a matter of math: the United States is three times more efficient in producing steel than many other countries, but is only twice as efficient in producing cloth than other countries. Therefore, the United States will gain more wealth by using more of its resources—raw materials, money, and labor—to produce steel. Whatever steel is not needed within the United States will then be exported. In turn, the United States will import cloth from those nations with a *comparative advantage* in the manufacturing of cloth.



Even though Great Britain can also produce steel more efficiently than cloth, it has shifted some of its resources from steel to cloth manufacturing. Why? Because in comparison to the United States, Great Britain is at a lesser disadvantage in its production of cloth than in its production of steel. In the same way that workers in factories often specialize in one task or skill, so nations also specialize in the production of certain goods.

## A Nation's Resources: Why Nations Make Certain Goods



As we answer one question, up pops another question. Why did the United States ever begin producing steel, paint, and aircraft? Why did Brazil begin growing and exporting coffee beans? Why did the Middle Eastern nations ever drill wells for crude oil? Because each of these nations had particular and unique *special resources*. Special resources include anything from the raw materials found in the earth to the skills and education of the people.

One of the reasons the United States began producing steel is because of our country's natural resources. We have the raw materials to make steel: huge deposits of iron ore and coal. In addition to these raw materials, the United States also has the capital resources—money and machinery to manufacture steel—and the labor, or workers. The United States has combined its natural resources and capital resources to produce a comparative advantage in the production of steel.

Brazil uses its special resources—its climate and soil—for growing coffee beans. Nations in the Middle East have a comparative cost advantage in crude oil, simply because that is where most of the crude oil in the world can be found and drilled.

## Nations Need the Goods Produced by Other Nations

Most countries cannot live on the goods they produce. They must trade with other countries to obtain necessary goods. So, for example, the Middle East trades its crude oil to nations without crude oil, such as the Western European nations. Nations in Western Europe trade their computers and aircraft to the Middle East and to Brazil, and to a hundred other countries. Brazil trades its coffee to the United States. The United States trades its steel to Brazil. If we were to draw lines on a map between those countries trading with one another, we would see a complex web of trading that illustrates this point: most of the countries throughout the world are dependent on one another for goods. The world is interdependent.

## A Case Study: Trade Agreements with Other Nations

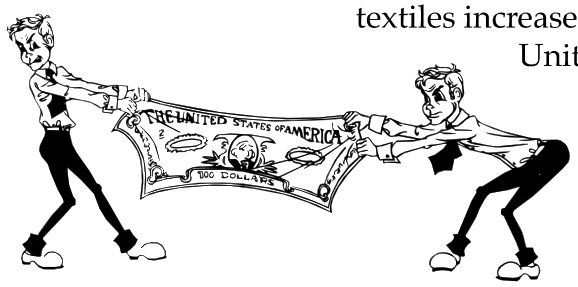
### North American Free Trade Agreement (NAFTA)

In 1993 the United States signed a trade agreement with Mexico and Canada. This agreement is called the *North American Free Trade Agreement* (*NAFTA*). NAFTA's goal for the United States, Mexico, and Canada is to begin a free-trade agreement between the three nations over a period of time. Until this trade agreement was ratified, these three nations had imposed **tariffs** on many goods entering their country from their two North American neighbors. A *tariff* is a tax charged by a government on goods imported to its country. NAFTA will eliminate almost all tariffs its member nations charge each other.

## Why Charge Tariffs on Imports

Why do nations impose tariffs on imported goods? A tariff will increase the price at which an imported good is offered to consumers. Take, for example, textiles—woven or knitted cloth—imported from Mexico to the United States. As these goods were shipped over the border, the United States government collected a tax. This tax increased the price of the textile when it was offered on the American market.

By artificially raising the price of imported Mexican textiles, the United States government hoped to accomplish a number of goals. A consumer in the United States would be less likely to buy Mexican textiles after a tariff was added to its price. Instead, a consumer would be more likely to buy textiles produced in the United States. When the sale of American textiles increases, the textile industry in the United States will increase. As the industry grows, more jobs will be available to workers in the United States. So tariffs help a country protect its own industries and create jobs.



Why are tariffs needed to increase the price of American textiles? Textile workers in Mexico do not receive as high a wage as textile workers in the United States. Cheaper labor costs usually mean cheaper prices to the consumer. Mexican textiles could be sold in the United States more cheaply than American textiles. Without tariffs, Mexican textiles would drive some or most of American textile manufacturers out of the market. The United States textile industry would shrink, and many jobs would be lost.

In addition to cheaper labor costs, other factors also make Mexican textiles cheaper to produce. Mexican factories do not have to operate as safely as factories in the United States. Operating a safe factory costs money. Ventilating the factory so workers breathe fresh and uncontaminated air is expensive. So is inspecting and fixing machines so they do not injure workers. Tariffs help to remove the advantage Mexican textiles would have because they are cheaper to produce.

Mexico also imposes trade barriers on products and services from the United States and Canada. The United States, for example, has not been allowed to compete for contracts in Mexico's public telephone system. The United States telephone industry has much experience and many resources which it could have used to gain much of the Mexican telephone market. This trade barrier insured that Mexico would control its own telephone system market.

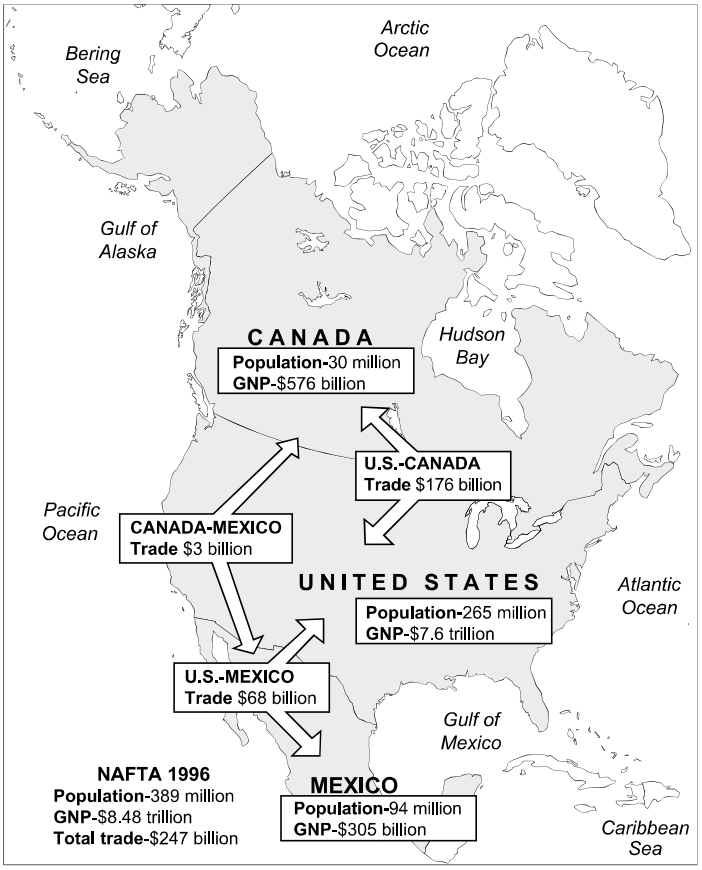
**Why NAFTA?**

If Mexico can produce cheaper goods, why would the United States and Canada agree to NAFTA? Why would Mexico permit the United States to compete for its telephone service? All three nations believe that opening trade in North America will increase their exports.

Without tariffs imposed on its goods, Mexico is banking on selling more goods to the United States and Canada. In particular, Mexico probably will sell more textiles and agricultural products to its neighbors.

The United States and Canada also believe they will sell more goods to Mexico. In addition, they believe that open markets will help Mexico's industries grow and its people find more jobs at better wages. As the income of Mexicans grow, they will have more money to buy goods—goods produced by Americans and Canadians. In short, all three countries

hope that free trade and open and expanding markets will increase their production and workforce. NAFTA will make the United States, Canada, and Mexico the largest free-trade area in the world. Together, these three North American nations will have an economy of over eight trillion dollars!




*The population, gross national product (GNP), and trade of the countries of the North American Free Trade Agreement.*

Source: U.S. Department of Commerce.

### Why Not NAFTA?

Only time will tell what the effects of NAFTA are for the United States. Some analysts argue that NAFTA will hurt the American economy. They claim that some United States companies will relocate to Mexico once the tariffs are removed. If products produced in Mexico can be sold in the United States market without paying a tariff, some United States manufacturers will move to Mexico to take advantage of its cheaper labor costs.

Some analysts also believe that cheaper Mexican products will drive some American manufacturers out of business. In manufacturing fields that are labor intensive, such as agriculture and textiles, this may be true. Supporters of NAFTA argue that although the United States may lose labor-intensive jobs, it will gain jobs in better paying fields, such as telecommunications and advanced technology. This argument claims that if Mexicans earn more money, they will purchase technologically advanced products.

## Unemployment: A Product of a Struggling Economy

Positive growth as measured by GDP, GPI, and CPI can mean prosperity and a growing economy. A downturn in these same indicators can mean that large numbers of people are unemployed. A downturn in the economy is the signal for the government to take steps to identify and offer solutions to try to solve the problem of unemployment.

### Defining Unemployment: More Than Not Having a Job

The United States government has a way of complicating information about unemployment that may seem rather simple to us. For example, we may consider a person without a job to be *unemployed*. The government, however, does not take such a simple view when determining who is and who isn't unemployed. Government economists must consider other factors. What about young people who are in school and looking for jobs? What about persons who have retired? Are they *unemployed*? What about people so disabled or sick that they cannot work? Are they *unemployed*?

The government has come up with a definition for unemployment that tries to answer some of these questions. To be classified as *unemployed*, a person has to file with the state unemployment agency. In Florida, that agency is the Job Services of Florida. A person must be at least 16 years of age, also be actively seeking employment, and be willing to take any job he or she is qualified to do.

To collect unemployment benefits, a person must meet additional requirements. A worker must have been fired for reasons other than misconduct. A worker must have left his old job through no fault of his own. And an unemployed person can collect benefits only for a certain number of weeks. If he does not find a job within a certain number of weeks, he may be listed by the government as someone looking for a job, but not as unemployed. And if he is not listed as *unemployed*, he will no longer receive benefits.

Because of the way government defines *unemployment*, there are often more people without jobs than are indicated by government statistics. In addition, some people may have taken jobs that pay salaries too low to meet their needs.

These people are considered *underemployed*. Some underemployed people only have part-time jobs when they may need full-time employment to meet their economic needs.

What about homeless people who have neither homes nor jobs? Many of these people do not meet the government's definition of unemployed. In addition, the government's definition does not consider students, retirees, and some others who cannot or will not work—even if work was available—as *unemployed*.


Unemployment is a serious matter for both persons who are unemployed and the government. Unemployment can lead to the loss of homes and property, and even disrupt family relationships. Unemployment means that the government collects less in tax revenues and must pay out more in benefits. To lower the unemployment rate, the government offers job training programs to help some of the unemployed learn the skills needed to find work. In addition, the government provides benefits to employers who hire special workers such as retirees, people with disabilities, and youthful employees.

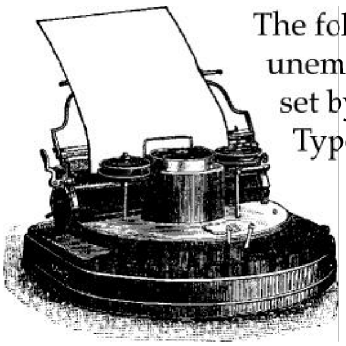
**The Types of Unemployment: Frictional, Structural, and Cyclical**

**Frictional Unemployment.** Economists have defined three basic types of unemployment. One type is called frictional unemployment. Frictional unemployment can be caused by the changes in our seasons. For example, in parts of the North, some construction workers who work outdoors become unemployed every winter when the weather is too severe. Crop pickers become unemployed when all of the crops have been picked for the season. Another example of frictional unemployment are actors who are in between jobs because one play or television show has ended and they have not found a new part. Frictional unemployment also includes those persons who have been fired or have quit and are looking for a new job.

The government considers a four percent or five percent unemployment rate to represent frictional unemployment. Frictional unemployment, the government says, is caused by the normal flow of people quitting one job to seek another, or jobs that naturally have nonworking periods. We will

always have frictional unemployment—it is unavoidable. Economists do not view frictional unemployment as a threat to the health of the economy.

**Structural unemployment.** Structural unemployment is a more serious and harmful type of unemployment for workers and the economy. Structural unemployment happens when a person's job is eliminated for good because it is no longer valuable or necessary. Whereas frictional unemployment follows a pattern of seasonal shifts that correct themselves, structural unemployment often does not have a self-correcting mechanism.



The following is an example of structural unemployment. Many years ago newspaper type was set by hand by skilled craftsmen called *typesetters*. Typesetters had to read type backwards in order to set a line of type for a newspaper. When computers came along, this skill was no longer needed. The computer could set type directly from a printed document to the master that printed the newspaper. This method was much cheaper and faster than the old method of setting type by hand. Typesetters lost their jobs and could no longer offer their skills to potential employers. To find a new job, typesetters had to learn new skills. This type of structural unemployment is also called *technological unemployment*.

Many other jobs or skills have also disappeared over the years. We no longer have many people shoeing horses, making buggy whips, or picking cotton by hand. Many jobs have required people to learn new skills. Secretaries must operate computers instead of typewriters, plumbers must work with plastic instead of metal pipes, and auto mechanics must work with electronic equipment in order to fix newer models of cars.

Some people cannot or will not learn the new skills necessary to continue in their line of work. They must often find a new job in a brand new field. Architects and engineers must now draw using Computer Aided Drafting (CAD) software. Those who cannot or will not learn the new methods cannot find work in that field.

The government tries to reduce structural unemployment by providing job training and temporary unemployment benefits for those seeking employment in a different field, and by encouraging employers to retire some workers near retirement age but who cannot or will not adapt to the new requirements of their jobs.

**Cyclical unemployment.** Cyclical unemployment produces the highest rate of unemployment and is the most difficult type to reverse. Cyclical unemployment is a result of downturns in the business cycle. When the economy is in a recession or depression, jobs dry up and many people become unemployed. During the Depression of the 1930s, as many as 34 percent of Americans were unemployed. Cyclical rates are much higher than either frictional or structural unemployment rates. In addition, training alone or temporary benefits may not solve the problem of cyclical unemployment. Often the economy must improve dramatically for unemployed persons to find work.

The chart below shows the percent of unemployment from 1965-1998 for the total civilian workforce. When the rate moves as little as 0.1 percent, approximately 136,500 workers are affected. *Unemployment rate* measures the percentage of workers who want jobs but can't find them. The unemployment rate is usually a *lagging indicator*. That means it increases *after* the economy slows. Likewise, the unemployment rate will not show a decline until *after* the economy improves.


Source: Bureau of Labor Statistics.

## Case Study: Unemployment

### The Great Depression

The nation's most serious *cyclical unemployment* occurred during the Great Depression. In the early 1900s, the United States economy was growing at an average pace. Migration and industrialization had definitely changed the political, social, and economical makeup of the United States. The United States government made a choice to enter World War I which in turn sparked our economy. After the war, new factories were built and new jobs were created. The economy boomed and many people lived better than ever before.

Though some Americans were becoming wealthy, many others could not earn a decent living. Important industries were in trouble, such as textiles, steel, and railroads. Farmers produced more than they could sell at a profit. Mining and lumber faced less demand for supplies since World War I ended. Coal faced competition from new forms of energy. The boom industries of the 1920s—automobiles, construction of buildings and homes, and consumer goods—declined. This affected the furniture and appliance businesses. Each industry had to make a choice to cut its labor force to reduce the production of goods.

As workers' incomes fell, fewer goods and services were bought. Many farmers who had gone into debt and could not pay their loans caused rural banks to fail. At the same time, dreams of wealth had led people to make the choice to take risks in the stock market. When stock prices fell, panicked investors sold their shares, causing a market crash. The stock market crash signaled the beginning of the Great Depression—the period from 1929-1941. The economy was in a severe decline, and millions of people were out of work.


After the crash, many Americans tried to withdraw their money from banks. This forced many banks to close. The banks had also invested and lost money in the stock market. Because the federal

government did not protect or insure bank accounts, these bank failures wiped out nine million individual savings accounts. People went to withdraw their money from the bank and would come home with nothing.

Some of the causes of the Great Depression were as follows:

- old equipment made some industries less competitive
- farmers produced more than they could sell at a profit
- availability of easy credit enabled people to go into debt
- too little money earned and in the hands of the working people, the majority of the consumers

President Herbert Hoover believed that people should succeed through their own efforts and that government should not interfere and help much with the economy. The federal government contributed to the crisis by keeping interests rates low. This allowed companies and individuals to easily borrow and build up larger debts.

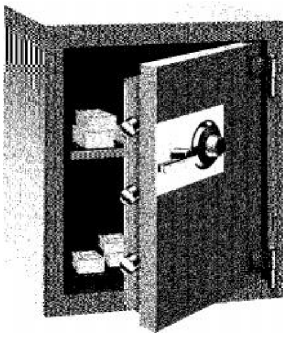
The 1930s saw a turnaround from the economic boom after World War I. Bad investments, increased use of credit and the installment plan to pay for goods and services, and poor economic policies led to the worst depression in modern times.

The Great Depression caused the government to make smarter choices about the economy. Today the government plays a major role in our nation's economy. Economists continue to measure the American economy using the GDP, GPI, and CPI. Our government allows a market economic system to operate, and has created the Federal Reserve Banking System, various forms of taxation and tariffs, and other laws and regulations.

## Summary

Measuring the American economy helps economists develop strategies to improve the rate of economic growth. Measuring the economy also helps economists develop solutions to problems in the economy, such as a high unemployment rate. The *gross domestic product (GDP)*, *gross personal income (GPI)*, and *consumer price index (CPI)* are three tools used to measure the American economy.

Economies depend on people within the United States buying and selling goods and services. This may happen at the local level, the state level, or at the national level. The United States also depends on its international trade or its trade with other nations throughout the world. Many of the goods Americans need to continue and improve their lifestyles come from other countries. In turn, we trade and sell many of the goods we produce to other countries. This trading, buying, and selling with each other and other nations reflects the country's and the world's *interdependence*.



To protect their own industries, many nations impose *tariffs*, or taxes, on imported goods. The United States, Canada, and Mexico signed the North American Free Trade Agreement (NAFTA) to remove or reduce tariffs on goods traded between the three countries. Each country hopes that NAFTA will help its industries grow and create new jobs. However, some analysts in the United States believe that NAFTA will hurt the American economy by giving Mexico an unfair advantage in trade. NAFTA will make North America the largest free-trade region in the world.

Rising unemployment usually accompanies a decline in the economy. Economists classify unemployment in three different ways. *Frictional unemployment* describes those people who are in between jobs. *Structural unemployment* describes those people whose jobs have been eliminated, often because of advancement in technology. And *cyclical unemployment* describes those people who have lost their jobs because the economy is in a downturn.