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Population Dilemmas in Europe

15.1 Introduction

You are driving in the south of Italy on a hot summer day. As you wind your way through dry, brown hills, you decide to stop for a cold drink. You park your car in the tiny village of Cersosimo. As you begin to walk through the old narrow streets, you notice something strange. Cersosimo is filled with elderly people! In fact, for every three faces you see, two of them are over 65 years old. Looking in at the village school, you see that children of all ages are studying together in just one small class.

Finally you find a shop where you can buy your cold drink. You ask the shopkeeper why there are so many elderly people and so few children in Cersosimo. He replies that families here just aren't having babies these days. A few years ago, the village tried to change this trend by offering to pay mothers a "birth bonus" for every baby born in Cersosimo. Even with the birth bonus, though, little had changed. Villagers still chose to have small families.

The story of Cersosimo is the story of Italy. Scientists who do research in **demography** say that it is also the story of Europe. Demography is the study of human populations and how they change over time. Demographers look at **birth rates** and **death rates** and human migration. These measures help them track population trends, or the general direction in which population numbers are moving. In Europe, for example, they are tracking a trend toward smaller families.

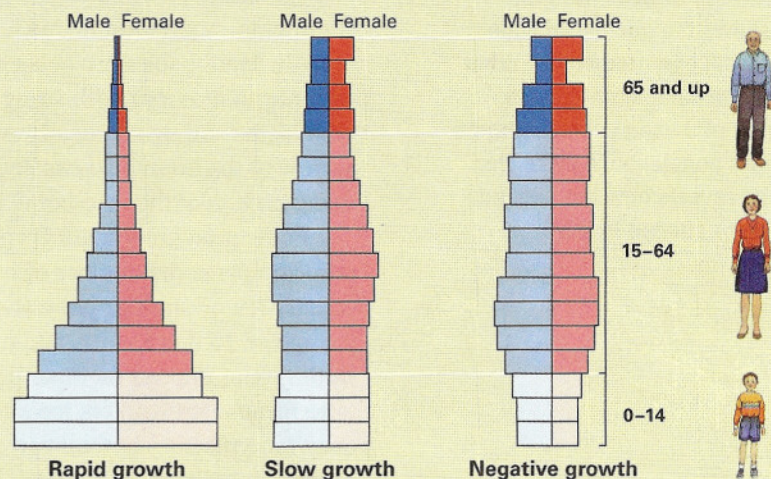
In this chapter, you will learn about population trends in Europe. You will see some of the problems created by shrinking family sizes. And you will explore how European countries are trying to address these problems.

Essential Question

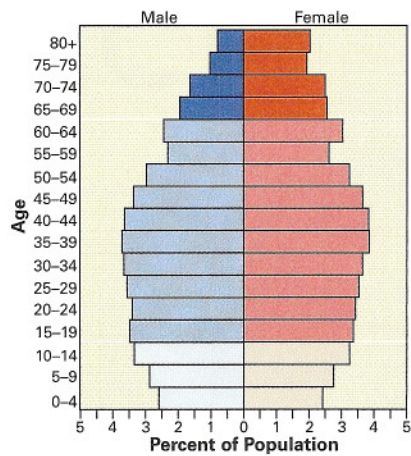
How do population trends affect a country's future?

These diagrams are called **population pyramids**. They show the makeup of a country's population by sex and age groups. Geographers use such diagrams to study population trends in a country. Notice how each pyramid has a different shape. Keep these pyramids in mind as you try to answer the Essential Question.

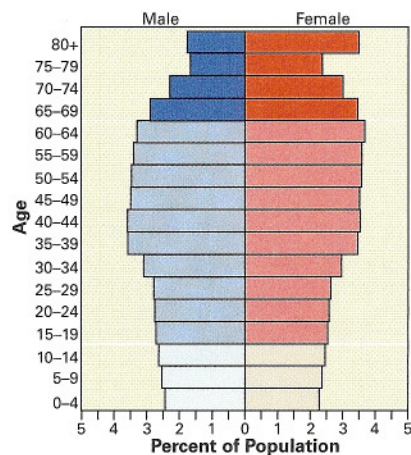
Graphic Organizer



Europe, 2000



Europe, 2025 (Estimated)



Source for population pyramid data: *United Nations Population Division, "World Population Prospects: The 2004 Revision Population Database,"* esa.un.org/unpp/.

Population Trends in Europe

A population pyramid is made up of two back-to-back bar graphs. One shows the number of males in different age groups. The other shows the number of females. The first of these pyramids graphs Europe's population in 2000. The second reveals how that makeup is likely to change by 2025.

15.2 The Geographic Setting

Europe is one of the smallest continents in size, yet about an eighth of the world's people live there. This high population density may not hold steady much longer for two reasons. First, Europe has the oldest population of any continent. Second, it has the lowest birth rate, or number of births per 1,000 people, of any continent. As a result, its population is shrinking.

Population Change: Births, Deaths, and Migration The study of population trends focuses on three factors: births, deaths, and migration. Whether a population grows or shrinks depends on the trends of these three factors.

Children are born every day in Europe, but the average number of babies born to each woman is low. This average number of births is called the **total fertility rate**, or TFR. In 2000, for example, the TFR in Italy was just over one baby per woman.

If the TFR remains this low, Italy's population will continue to shrink. To stop this trend, the TFR would need to rise to the **replacement rate**. This rise will occur when enough babies are born to replace the people who die each year. In Italy, the replacement rate is just over two babies per woman.

People also die every day in Europe, but they don't die as young as they used to. Over the past century, **life expectancy**, or the number of years a person can expect to live, has increased in Europe. In 2004, the average person in France could expect to live about 80 years. A century earlier, life expectancy in France was only 50 years.

People move into and out of Europe every day as well. In the past, most migration was out of Europe, as people left to escape wars and poverty. Today more people are migrating into Europe than are leaving it. Still, there are not enough immigrants arriving to keep Europe's population stable.

Population Pyramids Show Growth Trends Geographers use graphs shaped like pyramids to study population. These graphs show the ages and sexes in a population, with the youngest ages shown at the bottom and the oldest at the top.

The shape of a population pyramid shows how a country's population is growing. A pyramid that is wide at the bottom shows rapid population growth. More babies are being born each year than the number of people who die. A pyramid with straight sides shows slow population growth, with births and deaths nearly equal in that country. A pyramid that is narrow at the bottom shows negative population growth. More people are dying each year than are being born.

Population growth affects a country's **dependency ratio**. This ratio compares the number of people too young or old to work with the country's working-age population. In Europe, most young people under the age of 16 don't work, and most people over the age of 64 are retired. Both groups depend on other people to support them. A low dependency ratio means that workers have few dependents to support. A high dependency ratio means just the opposite—that there are a lot of young or old people for workers to support. Later you will see how Europe's high dependency ratio has posed problems for its economy.

► Geotermms

demography the study of human populations, including how they change due to births, deaths, aging, and migration

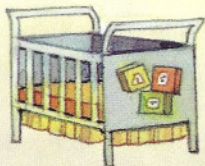
dependency ratio the number of old and young dependents who don't work compared with the working-age population. The higher the ratio, the more young and old people the workers have to support.

life expectancy the average age that a person in a given population can expect to live to. Life expectancy varies from one country to another.

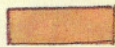
replacement rate the total fertility rate needed for a population to replace itself. This number varies by country, but is about 2.1 in most developed countries.

total fertility rate (TFR) the average number of children a woman in a given population will have in her lifetime. This number is different in different countries.

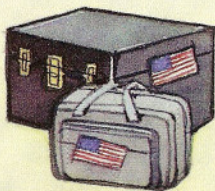
Population in One Year



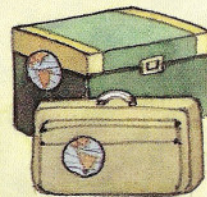
Births



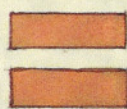
Deaths



Immigration



Emigration



Population in the Next Year

Factors That Cause Population Change

This diagram shows the factors that cause population change. Births and immigration cause growth. Deaths and emigration cause a population to shrink.



A Large Royal Family

In the 1800s, Queen Victoria and Prince Albert had nine children. A century later, Prince Charles and Princess Diana had two children.

15.3 Population Change in Europe

In 1840, Queen Victoria of England married Prince Albert. The couple had nine children, which kept Victoria so busy that Albert had to take over many of her royal duties. In those days, such large families were common in Europe. Today, as you have read, families of that size are very rare in Europe. In fact, Europe has gone from a growing population to one that is stable or shrinking.

From Slow to Fast to No Growth Before the 1750s, the population of Europe rose and fell over time. In bad years, plagues, famines, and wars killed huge numbers of people. In good years, there was enough food to support large families. Overall, there were slightly more births than deaths, keeping population growth low.

In the 1750s, Europe entered a long period of accelerated population growth. Improvements in sanitation and health care caused death rates to drop. Food supplies increased, making it possible for the population in Europe to grow.

After 1900, most Europeans moved from farms to cities. As a result, they no longer needed large families to help with the farming. Birth rates began to fall. By 2000, Europe had entered a period of no, or even negative, population growth.

Populations in Transition

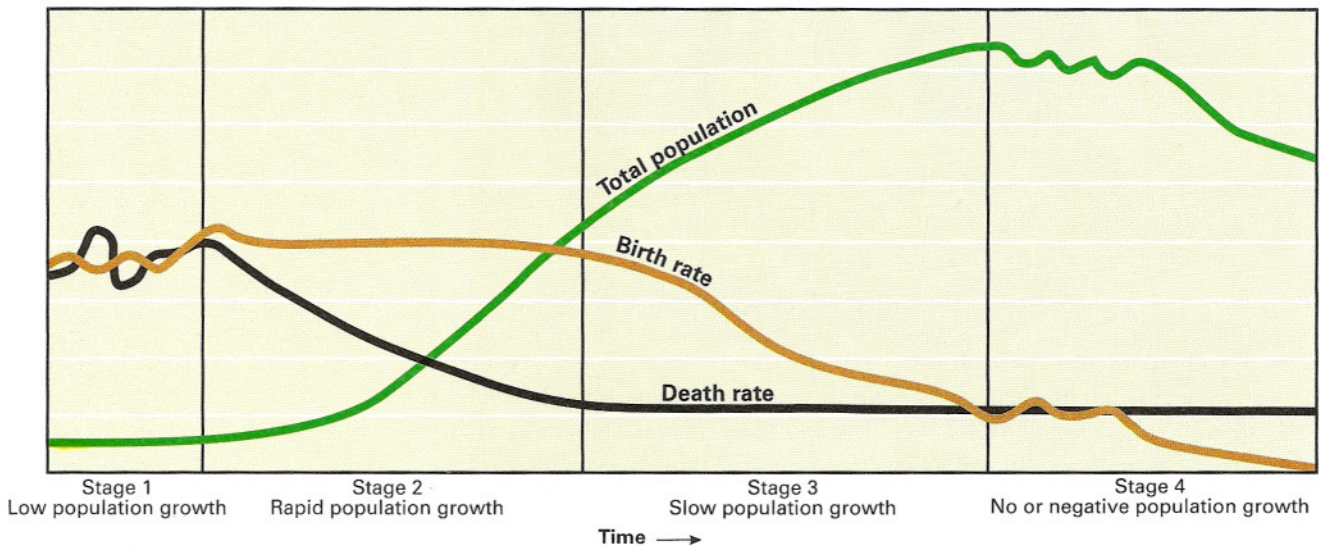
The demographic transition model shows population change over time. The word *transition* means change. There is no fixed time for each stage. Some countries may pass through all four stages as they develop. Others may not.

A Model of Population Change Demographers have identified several stages of population growth. The four major stages are shown below in the **demographic transition model**. A model is a simplified version of something complex that can be used to make predictions. According to this model, populations go through transitions, or changes, as a country develops its economy.

Stage 1: Low population growth. In this stage, high birth rates and high death rates result in little population change. All populations begin at this stage.

Stage 2: Rapid population growth. Birth rates remain high as economic development begins. But death rates fall as food supplies increase and health care improves. The result is rapid growth.

The Demographic Transition Model



Stage 3: Slow population growth. As the economy improves, birth rates drop. Death rates stay low, and population growth begins to slow down.

Stage 4: No or negative population growth. In developed countries, both birth rates and death rates drop to low levels. As a result, there is little or no population growth. Over time, birth rates may fall behind death rates, resulting in a shrinking population.

15.4 Dilemma One: A Shrinking Population

Between 2005 and 2050, Italy's population is expected to shrink from 58 million to about 50 million people. This dramatic plunge in population could have far-reaching effects on the country. Looking ahead, Italy might see empty schools, vacant apartments, and closed businesses.

Causes of Negative Population Growth A country's total fertility rate is an important factor in determining its future population. By 2004, Italy's TFR had fallen well below the replacement rate of 2.1 children per woman. And Italy was not alone. Across Europe, total fertility rates were on the decline.

There are many reasons for Europe's low birth rates. More European women are putting off having children so that they can pursue their education and careers. Women who wait until they are older to start having babies tend to have fewer children. And access to family-planning methods in Europe makes it possible for women to control the number of children they have.

Family finances play a part in how many children people choose to have. The high cost of living in much of Europe makes people concerned about being able to support a family. Because housing costs are high, young couples often need two incomes to buy a home. As a result, young women sometimes put off having children in order to work.

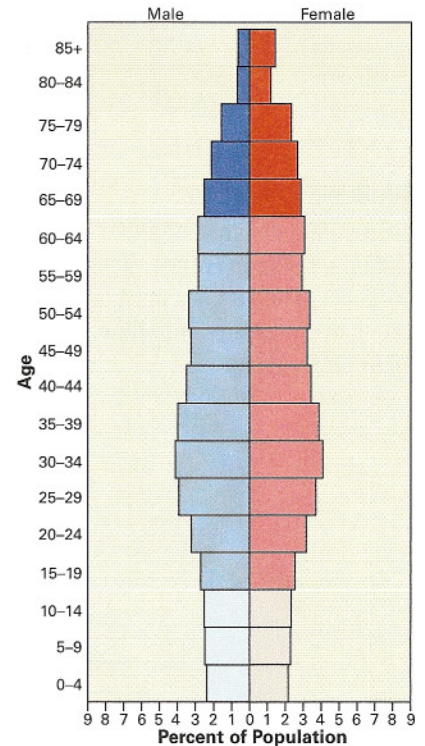
Working couples who want children face the issue of childcare. In the past, mothers cared for their children at home. When both parents work, however, they need help to care for their children during the day. Quality childcare can be expensive and hard to find, discouraging couples from having large families.

Problems Caused by Negative Growth Many problems arise when populations shrink. Fewer children need fewer schools and teachers. Over time, declining enrollment means that schools may have to close and teachers may lose their jobs. Other people who work with children may also find themselves out of work. And businesses geared toward children, such as toy stores and children's clothing stores, could go out of business.

Declining population can have a serious effect on a country's economy. Babies grow up to be workers, so, down the line, low birth rates can lead to labor shortages. When businesses cannot find enough workers, they sometimes move to countries that have a better labor supply. This change could hurt Europe's economy.

Negative growth also means fewer people to serve in military forces. As a result, European countries may lose some of their power and influence in the world.

Italy, 2000



A Shrinking Population in Italy

This pyramid shows the population of Italy in 2000. Notice how narrow the graph is at the base. This is a sign of a shrinking population.



Childcare in France

These young children attend a childcare center in France. Good, affordable childcare is a must in nations that want to encourage higher birth rates.

15.5 Responses to Negative Growth

In the past, the Italian government encouraged large families as part of Italy's culture. Even so, many couples did not choose to have lots of children. In 2003, the government tried something new. If families with at least one child had another baby, it would pay them a "birth bonus" of 1,000 euros, or about \$1,000.

Cash and Benefits for Having Babies It may seem strange to pay families for having babies. Yet Italy is not the only country in Europe to offer a cash incentive for larger families. France, for example, gives a birth bonus for every child born in the country. A family with three or more children receives additional benefits, such as reduced rents and lower taxes. It's not yet clear whether paying cash for having babies works well over time. Sometimes birth rates will rise for a few years and then drop again.

Other countries don't believe in paying families to have babies. Instead, some try to lower the costs of having children. One example is Sweden, which offers government assistance to help parents pay for daycare for small children.

Family-Friendly Policies for Parents European governments recognize that the difficulty of balancing work and family life discourages many couples from having children. Quality childcare is one prevalent issue. Another is job security. Working parents often want to take time off work to care for their children. But they fear that if they do so, they may lose their jobs.

Many European governments have responded to this fear with family-friendly policies to help working parents. One policy allows a new parent to stay home with a baby without losing his or her job. This time away from the job is called a *leave*. During the leave, the parent is still paid. When the leave ends, the parent returns to work. Other policies include flexible work hours and the right to work part-time. Governments hope that policies like these will help remove some of the barriers to having children and to staying in the workforce.

15.6 Dilemma Two: An Aging Population

Europe is sometimes called “the old continent” because of its aging population. By 2050, the average age of a person in Spain will be 50 years, making the population of Spain the oldest in the world. This aging population will also mean more old people for Spain to care for.

In the past, most old people in Spain lived in their own homes or with relatives. With people living longer today, Spain needs new living arrangements to accommodate its elderly population. To illustrate this point, consider the example of a home for seniors near Madrid, the capital of Spain. The home is large, with space for 600 people. Not only is the home filled, but also there are 20,000 people on a waiting list who would like to move in! The demand for retirement housing will only grow as Spain’s elderly population grows.

Causes of an Aging Population A population ages for two reasons. The first is a rise in life expectancy. The second is a drop in the birth rate. Both trends are taking place across Europe today. The result is that there are more old people and fewer young people than in the past—an aging population.

Europe will age even more rapidly in the years ahead because of a **baby boom** from 1945 to the 1960s. A baby boom is a sudden increase in the birth rate. Europe’s baby boom began not long after World War II ended. During the 1950s and 1960s, women had a lot of babies. This means that there is a large population of Europeans born in these years. In the 1970s, birth rates began to fall.

By the year 2000, the first people born during Europe’s baby boom were entering their 50s. In the next decade or two, many of these baby boomers will retire, swelling the elderly population of Europe.

Problems Caused by an Aging Population Most people would agree that having longer, healthier lives is a good thing. Yet an aging population also creates problems for a society. The two biggest concerns are **pensions** and health care.

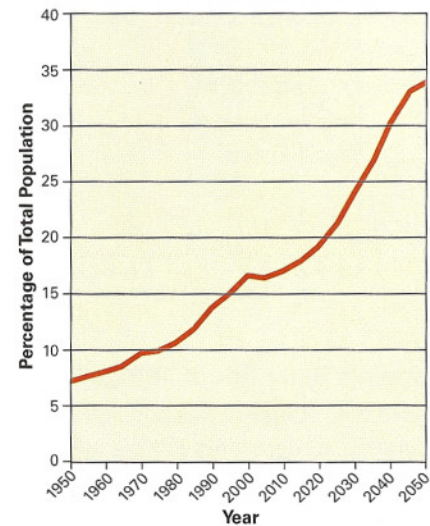
A pension is a fixed amount of money paid to a retired person by a government or former employer. A pension is usually paid from the time a person retires until he or she dies.

Health care is of concern because as people age, their need for health care increases. Older people are more likely than young people to suffer from such diseases as cancer, diabetes, and arthritis. They are more likely to need expensive surgeries and costly medicines. Some need special care available only in nursing homes. All of these needs cost money.

Most European governments provide pensions and health care for its senior citizens. The money to pay for both comes from taxes paid by working people. This system works as long as the dependency ratio is low. But the combination of a growing elderly population and fewer young people joining the workforce is causing the dependency ratio to rise. In other words, an ever-smaller workforce is supporting an ever-larger elderly population.

The simplest solution to rising costs is for governments to budget more money for pensions and health care, which most governments have done. To do this, though, governments must collect more tax revenue. And there are limits to how much workers are willing to be taxed.

Spain’s Elderly Population

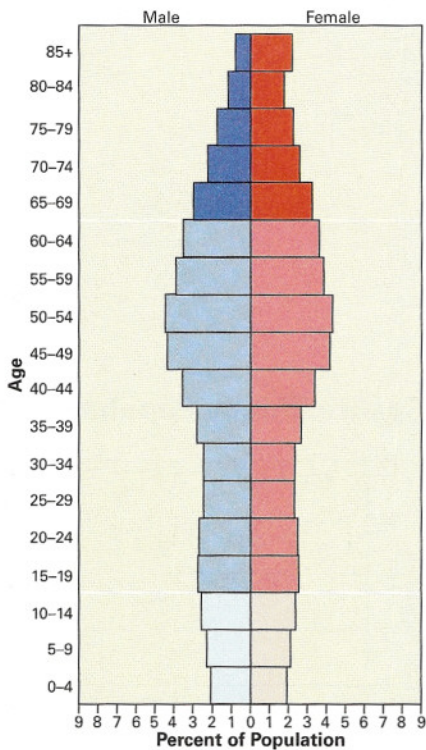


Population Aging in Spain

This line graph shows how the percentage of people aged 65 and over is increasing in Spain. One reason for the change is a steady rise in life expectancy.

15.7 Responses to an Aging Population

Spain, 2025 (Estimated)



Spain's Baby Boom "Bulge"

Note the "bulge" in this population pyramid. It represents Spain's baby boomers. Over time, the bulge will move up the pyramid. At this happens, the number of pensioners in Spain will increase.

In 2002, Spain hosted the United Nations Second World Assembly on Ageing. Kofi Annan, the United Nation's secretary-general, opened the meeting. For the first time in history, he reported, older people will soon outnumber young people. Borrowing a line from a song by the English band the Beatles, Annan asked the assembly, "Will you still need me, will you still feed me, when I'm 64?" Then he added, "I trust the answer is yes."

Dealing with Pension Costs One of the issues discussed at the UN assembly was how to solve the problem of rising pension costs. With more retired people in Europe than ever before—who are also living longer than in the past—European countries face the challenge of how to support their seniors.

One way to reduce pension costs is to cut the amount of money each worker receives. But cutting pensions too much seems unfair to people who depend on this income to live.

Another approach is to raise the retirement age. Keeping people in the workforce longer will shorten the time during which they will need government pensions. Germany, Italy, and the United Kingdom have all increased the age at which pensions begin. Other countries give bonuses to people who delay their retirement. Spanish workers get a higher pension if they put off retirement until after age 66.

Providing Health Care Governments are also searching for smarter ways to provide health care for their elderly citizens. For example, two relevant principles guide health care policies for Germany's elderly population. The first principle is that preventing health problems is better than treating them. The second is that home care is preferable to care in a nursing home.

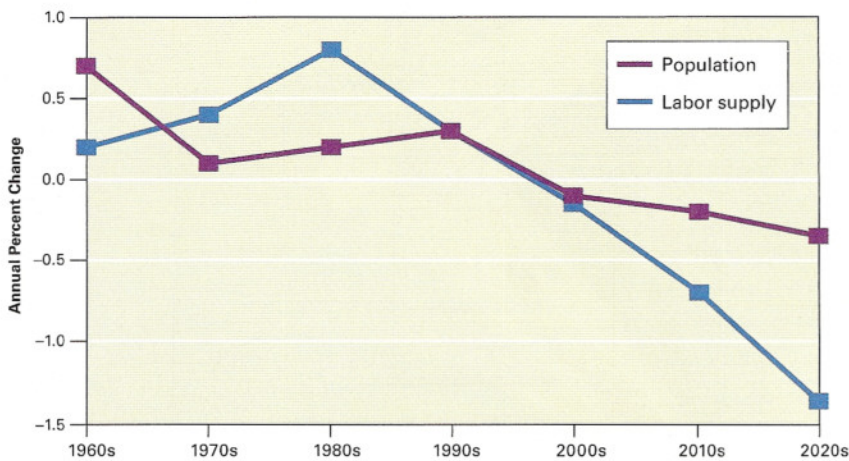
Many countries are looking at ways to encourage family members to care for older relatives at home. Home care costs less and is often preferred by older people. Italy provides special health services to families who care for relatives. Austria pays pensions to people who give up jobs to care for family members.

Lining Up for Pension Checks

These Italians are waiting for their pension checks. Like most older Europeans, they live on monthly payments from their government.



Changes in Germany's Population and Labor Supply



15.8 Dilemma Three: A Declining Workforce

In 2004, a German museum opened an exhibit called “Shrinking Cities.” It showed what happens when a city like Leipzig, Germany, loses most of its workforce. Leipzig’s problems began with a drop in the birth rate which, in turn, meant an eventual drop in the city’s workforce. Faced with a shortage of workers, businesses left the city. Workers left as well in search of better jobs. Now Leipzig is mainly a city of elderly citizens and unemployed workers.

Causes of Workforce Decline The main cause of workforce decline across Europe is simple. More workers retire each year than join the workforce. This decline will only grow worse as baby boomers start to retire. The number of workers in Germany, for example, will likely fall from 42 million to 30 million over the next 50 years.

Workforce decline leads to changes in the dependency ratio—the ratio of dependents to workers—as more and more people are dependent on fewer and fewer workers. In Germany there were 87 dependents for every 100 workers in the year 2000. By 2030, however, estimates show that 100 workers will be supporting 121 dependents. That’s a rise of 39 percent in Germany’s dependency ratio.

Problems Caused by Workforce Decline In many European countries, young people have trouble finding jobs. To them, a shrinking workforce looks like a good thing. As older workers retire, there will be more jobs for young workers.

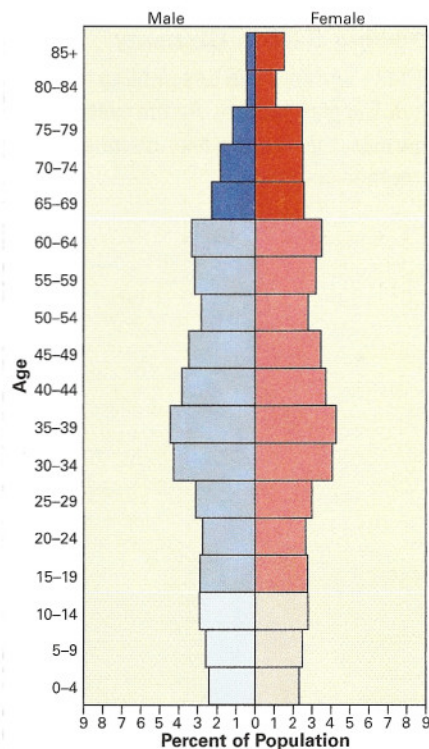
For a business, however, workforce decline can be a problem. By the year 2050, the number of highly skilled German workers will decline by about 2 million people. Faced with a shortage of skilled workers, some businesses may choose to leave Germany. Others may shrink their operations or close their doors altogether. The German economy may start to shrink as well.

Not only does workforce decline cause problems for businesses, but it also poses a big problem for the government. Workers pay most of the taxes that support government programs. Fewer workers will mean less tax money just at a time when the dependency ratio is rising.

Fewer Workers in Germany's Future

Germany’s shrinking population creates problems for business. One problem is fewer customers. Another is a shortage of skilled workers. This will get worse as baby boomers retire. Look at the percentage of change for each decade.

Germany, 2000



Germany's Working-Age Population in 2000

Germany’s working-age population is shown in medium colors in the middle part of this graph. People too young to work are shown in light colors at the bottom. People too old to work are in dark colors at the top. In 2000, working-age people outnumbered these dependents. By 2030, just the opposite will be true.



Making Cars in Germany

These workers are assembling a car in a German factory. As the workforce shrinks, this factory may be moved to another country.

15.9 Responses to a Declining Workforce

In 2004, about 75,000 jobs in Germany went unfilled. Employers could not find enough skilled German workers to fill these positions. Then the government passed a new immigration law making it easier for companies to hire skilled workers from other countries. The government hoped that this change would slow Germany's workforce decline.

Finding More Workers in Europe Many countries in Europe are trying to slow workforce decline. One approach is to keep older workers working longer. Germany, for example, retrain its older workers and gives aid to companies that hire older workers. Other countries encourage older people to work part-time or at home.

Another approach to slowing workforce decline is to encourage more women to join and then stay in the workforce. In the past, a woman often left the workforce after having her first child because she found it difficult to balance work and family life. Women also made less money than men, a further disincentive to work.

Now European governments are realizing how crucial family-friendly work policies are to retaining women in the workforce. You read earlier about such policies as giving parents paid time off work when they have a baby, allowing flexible work schedules, and ensuring quality childcare. By helping women balance work and family, governments hope to make staying in the workforce appealing.

Looking for Workers Outside of Europe Another way to address the problem of workforce decline is to look for workers outside of Europe. One way to find those workers is to move jobs once done in Europe to other parts of the world. For example, the German company Volkswagen no longer makes all of its cars in Germany, but has factories in Brazil, Mexico, South Africa, and other countries.

A second way to find additional workers is to encourage immigration to Europe. Not all Europeans, however, welcome this idea. They worry that immigration may cause more problems than it solves.

15.10 Beginning to Think Globally

In this chapter, you learned about demography, the study of human populations and how they change. You learned how a type of graph called a *population pyramid* shows the population makeup of a country. These graphs show whether a particular population is likely to grow, stay the same, or decline.

Negative Growth in Europe You also learned that most countries in Europe face negative population growth. This happens because the total fertility rate has dropped below the replacement rate. In other words, women are not having enough babies to replace the people who die each year. At the same time, Europe's population is aging. This is because life expectancy is rising.

Negative population growth in Europe has posed several problems, including an increase in dependency ratios. Most retired Europeans depend on their governments for pensions and health care. Governments, in turn, depend on taxes paid by working people to pay for these benefits. But with declining populations, there are fewer workers each year to pay those taxes at the same time that there are more old people depending on those taxes for support.

Global Population Trends Europe is not the only place with an aging population. Developed countries in other world regions are seeing the same population trends. Japan, for example, is aging as rapidly as Europe.

Many developing countries are seeing different population trends than developed countries. In developing countries, total fertility rates are dropping more slowly, and life expectancy is rising slowly as well. For example, in Nigeria the total fertility rate in 2004 was over five children per woman. Life expectancy for a child born that year was about 50 years. As a result, Nigeria's population is young. It is also still growing.

As you look at the next section, think about these population trends in developed and developing countries around the world.



A Young Population in Nigeria

Nigeria has a much higher birth rate than Italy. As a result, 43 percent of its population is under the age of 15. Only 14 percent of all Italians are under the age of 15.

15.11 Global Connections

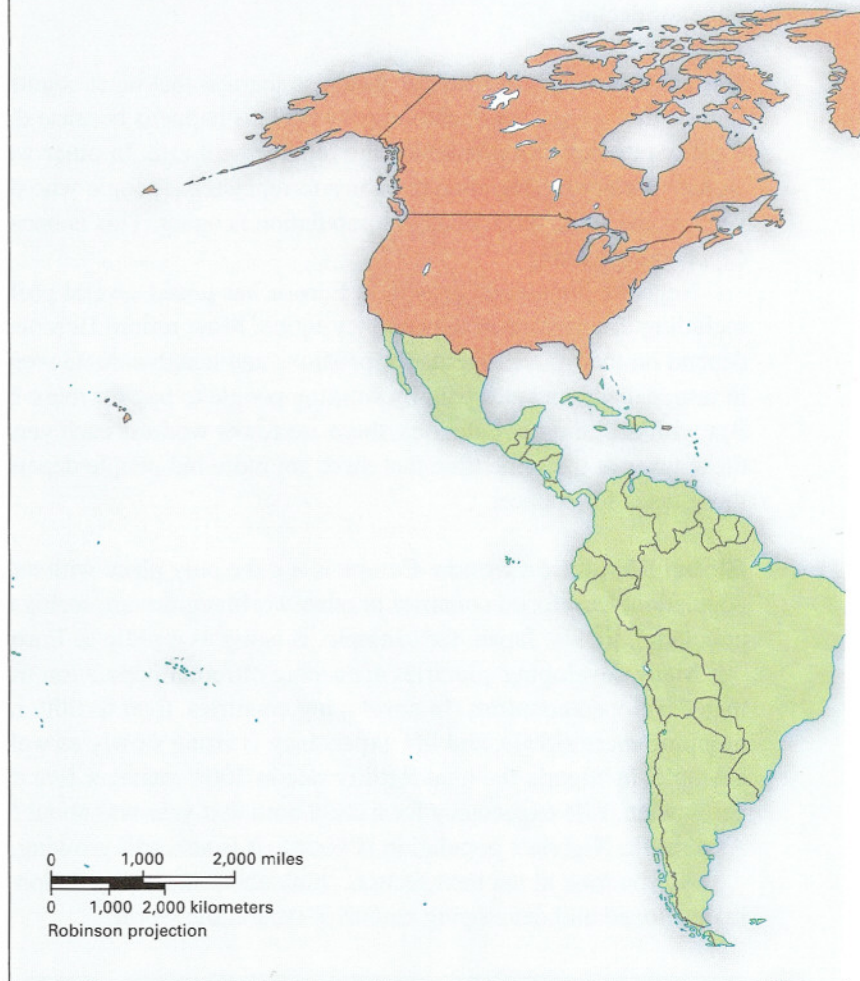
This map divides the world into developed (rich) and developing (poor) countries. Most rich countries have industrial economies and a high per capita GDP. Most poor countries have an agricultural economy and a low per capita GDP. The pyramids compare the populations of rich and poor countries in 2000 and in 2025.

Why do developed countries have lower birth rates than developing countries? People in all countries want children. But in developed countries, children usually aren't needed to support a family or aging parents. Instead, the cost of raising children is seen as an expense. Also, family-planning methods are more available to help couples choose the size of their families.

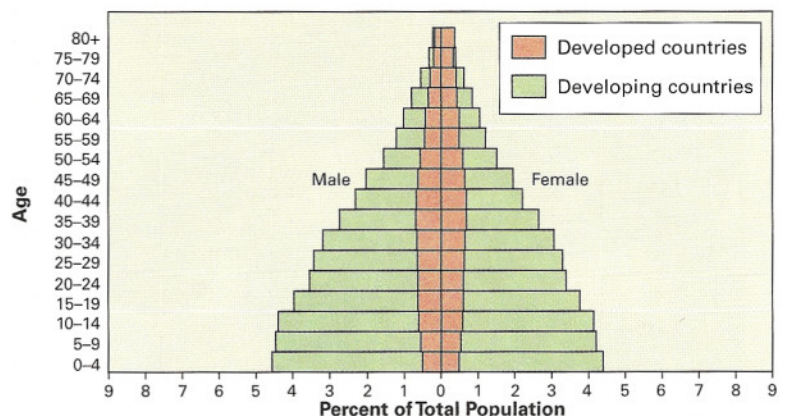
Why do developing countries have higher birth rates than developed countries? In poorer countries, poverty plays a role in family size. Children often help support their families by working, and also often support their parents in old age, since the government often does not. As a result, a large family is seen as a benefit, not an expense. In addition, many poor countries have a high infant mortality rate. Couples sometimes choose to have many children, fearing that some may die early in life. Finally, a lack of access to family-planning methods means that women sometimes have little control over the number of children they have.

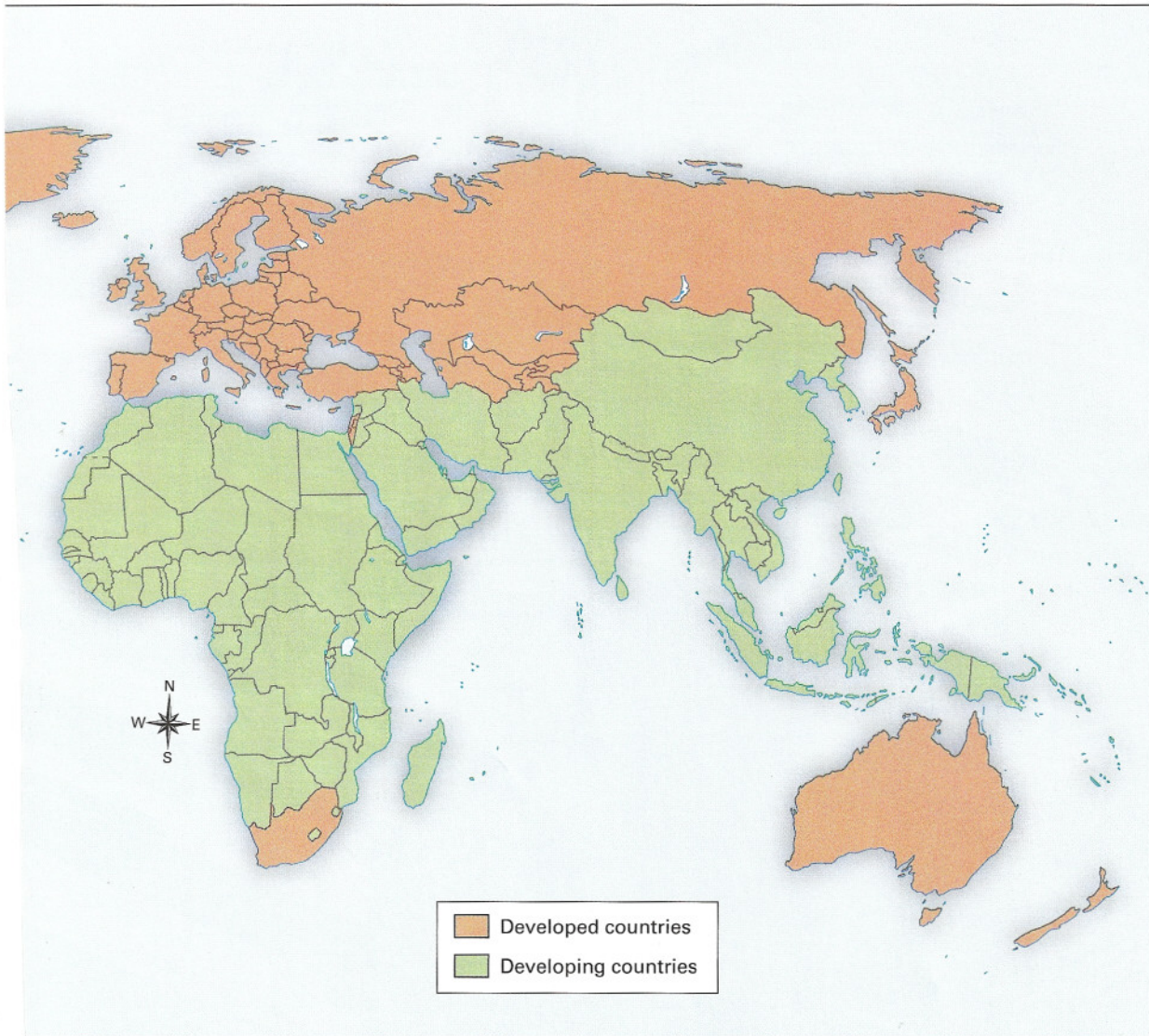
How might high birth rates affect a country's future? Countries with high birth rates have more young than old people. They may not have enough schools to educate their children or enough jobs to employ their young adults. Anger over the lack of such opportunities may lead to widespread frustration and unrest.

The Developed and Developing World



World Population, 2000





World Population, 2025 (Estimated)

