

## What Drives U.S. Population Growth?

*by Mary M. Kent and Mark Mather*

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*U.S. population is growing faster than that in other more developed countries.*

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*The excess of births over deaths accounts for about 60 percent of U.S. growth.*

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*Immigrants and their children contribute a growing share of U.S. population growth.*

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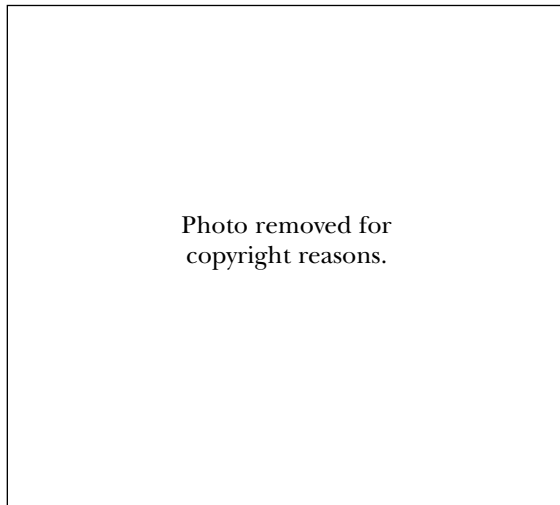
# What Drives U.S. Population Growth?

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The U.S. population is growing as fast as or faster than any other more developed country. Between 1990 and 2000, nearly 33 million people were added to the U.S. population—a group nearly as large as Argentina’s population, and the greatest 10-year increase ever for the country. This growth is in stark contrast to the slow or negative population growth in other more developed countries, and reinforces the United States’ demographic position in the developed world.

At 288 million in 2002, the United States is also the world’s third-largest country. Although it is well behind numbers one and two—demographic billionaires China and India—the United States remains the largest more developed country. Russia, with 145 million in 2002, comes closest in size, but its numbers are dwindling because it has more deaths than births each year. Japan—at 127 million the third-largest more developed country—also faces population decline in the near future. Other more developed countries, a group that includes the rest of Europe, Canada, Australia, and New Zealand, are far smaller and are not expected to grow much larger over the next half-century. The United States, in contrast, is projected to add nearly 140 million people by 2050, bringing the population total to 420 million.

One of the striking differences between the United States and other



*Growth and diversity, fueled by relatively high birth rates and immigration levels, characterize the U.S. population in the early 21st century.*

more developed countries is the United States’ youth. More than one-fifth of the U.S. population was under age 15 in 2002, compared with less than one-seventh of the Japanese population. While the populations of the rapidly growing countries of Africa and Latin America have much younger profiles—many with more than one-third under age 15—the United States is still young enough to generate future growth. The age structure, along with relatively high fertility and immigration, is likely to fuel continued U.S. population growth.

The sources of growth are also bringing diversity. The populations of

*Table 1*  
**U.S. Population Census Totals,  
 1900–2000**

Year	Total population (millions)	Population increase (millions)	Percent increase
1900	76.0	—	—
1910	92.0	16.0	21
1920	105.7	13.7	15
1930	122.8	17.1	16
1940	131.7	8.9	7
1950	151.3	19.7	15
1960	179.3	28.0	19
1970	203.3	24.0	13
1980	226.5	23.2	11
1990	248.7	22.2	10
2000	281.4	32.7	13

Note: Data for 1900 through 1940 exclude Alaska and Hawaii.

Source: U.S. Census Bureau, *2001 Statistical Abstract of the United States* ([www.census.gov/prod/2002pubs/01statab/pop.pdf](http://www.census.gov/prod/2002pubs/01statab/pop.pdf), accessed Nov. 1, 2002): table 1.

many countries are becoming more ethnically and culturally diverse, but the U.S. population is undergoing such a dramatic transformation that current labels of race, ethnicity, and minority may have little meaning in 50 years. Some Americans are concerned that this diversity and growth may harm the U.S. economy, disrupt the social structure, or cause environmental deterioration, while others see these changes as a source of strength and revitalization.

This *Population Bulletin* will look at the sources of growth and change in the U.S. population, especially compared with other more developed countries.

## How Much, How Fast?

Between 1990 and 2000, nearly 33 million people were added to the U.S. population. This recent surge capped a century in which the U.S. population soared from 76 million to 281 million (see Table 1).

While the U.S. population increased substantially throughout the 20th century, the percent increase each decade varied from 21 percent between 1900 and 1910 to 7 percent between 1930 and 1940. After holding steady at close to 10 percent per decade between 1970 and 1990, the pace quickened in the 1990s. The magnitude of growth during the 1990s surprised even the Census Bureau and population experts who track demographic trends. The 2000 Census count came in about 7 million higher than expected. Many demographers think that much of this discrepancy is explained by international migration: More immigrants settled in the United States and fewer residents moved abroad than the Census Bureau had anticipated.<sup>1</sup>

The U.S. population grew at about 1 percent annually during 2000 and 2001, just under the average for the 1990s. The United States is projected to reach nearly 350 million by 2025 and 420 million by 2050. In contrast, population growth has slowed in other more developed countries over the last half-century (see Figure 1). The combined population of the other more developed countries is projected to decline after 2010.

Japan and the 15 European Union (EU) countries grew at less than 0.3 percent between 2000 and 2001.\* By 2020, the current 15 EU countries are projected to stop growing altogether, and Japan is facing population decline.<sup>2</sup> Relatively “young” Canada and Australia project continued population growth between 2000 and 2050, but at slower rates than those forecast for the United States.<sup>3</sup> The United States is secure in its position as the largest of the more developed countries, under the current definitions of this group (see Table 2).

What accounts for the faster population growth in the United States? Answering this requires a look at the three demographic variables that

\*The European Union (EU) members in 2002 are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom. With a common currency and a combined 2000 population of 377 million, the EU is one of the world’s largest economic blocs. Ten new member countries, all eastern European, are scheduled to join the EU before 2005.

determine population growth or decline: fertility, mortality, and migration. In most countries, fertility is the primary engine driving population change. In the United States, natural increase—more births than deaths—accounted for just over 60 percent of population growth between 2000 and 2001. Net migration—more people moving into than out of the country—accounted for the remaining 40 percent of the growth (see Box 1, page 6).

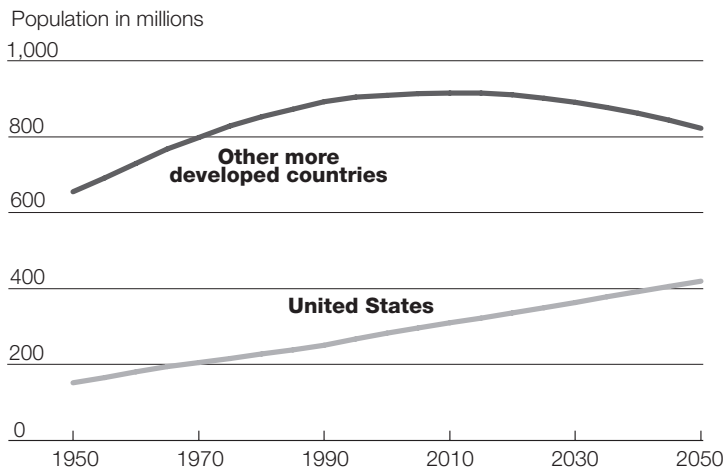
The relative importance of each component of growth varies in other more developed countries. Japan, for example, has one of the world's lowest fertility rates and admits relatively few immigrants. Natural increase accounts for nearly all of the country's population growth. Although Japan admits slightly more foreign workers now than it did in previous decades, net migration was officially near or below zero during most of the 1990s.<sup>4</sup>

In many European countries, decades of low fertility combined with expanding communities of foreigners have made immigration a major source of growth. In 2000, net migration accounted for about two-thirds of the population growth in the 15 EU countries. Some countries, including Germany and Italy, experienced natural decrease in the 1990s because they had more deaths than births, and only immigration prevented population decline.<sup>5</sup> Yet a United Nations (UN) analysis has shown that immigration is unlikely to prevent population loss in Europe in the long run.<sup>6</sup>

Differences in mortality rates can affect population growth rates, but they account for little of the difference in population growth among more developed countries where mortality is already low. U.S. mortality rates at most ages are higher than in other more developed countries outside eastern Europe. U.S. rates could fall even further if preventable deaths to children and young adults were reduced. Mortality may also improve at the older ages as people obtain better medical treatments and adopt healthier lifestyles.

Figure 1

### Population Growth in the United States and Other More Developed Countries, 1950–2050



Note: Other more developed countries include all European countries, Australia, Canada, Japan, and New Zealand.

Source: U.S. Census Bureau, International Data Base (Oct. 10, 2002, release; [www.census.gov/ipc/www/idbagg.html](http://www.census.gov/ipc/www/idbagg.html), accessed Oct. 12, 2002).

Table 2

### Population of the United States and Selected More Developed Countries, 2002 and 2050 (Projected)

	Population (millions)		Percent change
	2002	2050	
United States	287.7	420.1	46.0
Russia	145.0	118.2	-18.5
Japan	127.1	99.9	-21.4
Germany	82.4	73.6	-10.7
France	59.9	61.0	1.8
United Kingdom	59.9	64.0	6.8
Italy	57.9	50.4	-13.0
Ukraine	48.4	37.7	-22.0
Spain	40.2	35.6	-11.4
Poland	38.6	33.8	-12.4
Canada	31.9	41.4	29.8
Australia	19.5	24.3	24.6

Source: U.S. Census Bureau, International Data Base (Oct. 10, 2002, release; [www.census.gov/idb/](http://www.census.gov/idb/), accessed Oct. 12, 2002).

## Fertility

Fertility has been the driving force of population growth in the United States. In every decade of the 20th century, births far outnumbered deaths, generating natural increase. In 2001, 4.0 million babies were born in the United States, while 2.4 million people died. The annual number of

*Box 1*

## The Components of Population Change

Three variables drive population change: fertility, mortality, and migration. Between July 1, 2000, and July 1, 2001, the U.S. population grew by nearly 2.7 million people: 1.6 million from the excess of births over deaths and 1.1 million from net international migration (people moving into the country minus those moving out). Natural increase accounted for about 60 percent of the growth, while net international migration contributed nearly 40 percent.

The relative contribution of net migration appears to have increased during the 1990s, based on the 2000 Census count. But because the numbers of emigrants and illegal immigrants are not known precisely, the estimates for net migration have a wide margin of error.

### Population Change in the United States, July 1, 2000, to July 1, 2001

<b>Population, July 1, 2000</b>	<b>282,124,600</b>
Natural increase	1,617,500
<i>Births</i>	4,052,800
<i>Deaths</i>	-2,435,300
Net migration*	1,065,000
<i>Immigrants</i>	1,279,800
<i>Emigrants</i>	-214,800
Total Increase	2,672,300
<b>Population, July 1, 2001</b>	<b>284,796,900</b>

Note: Subtotals may not add to totals because of rounding.

\*Net migration is based on estimates of legal and undocumented migrants, resident nonimmigrants or temporary migrants, and estimates of the emigration of foreign-born and U.S.-born residents; includes a net movement of federal employees and dependents overseas.

Sources: Based on estimates in U.S. Census Bureau, "Estimated National Demographic Components of Change: July 1, 2000, to July 1, 2001" (Dec. 27, 2001, release; <http://eire.census.gov/popest/data/national/populartables/table03.php>, accessed Oct. 12, 2002); and "Methodology: Resident Population Estimates of the United States" (<http://eire.census.gov/popest/topics/methodology/national.php>, accessed Nov. 12, 2002).

births determines population growth, but this number, often measured as births per 1,000 population, reflects the share of women of childbearing age as well as the average number of children each woman bears. Demographers often look at the changes in the average number of children per woman to detect trends that can be used to forecast future growth. The total fertility rate (TFR) is often used to measure the average total number of children a woman would have given current birth rates.

The U.S. TFR fluctuated widely during the 20th century. In the early 1900s, native-born white women were having an average of 3.5 children over their lifetimes.<sup>7</sup> In the first decades of the 20th century, high fertility rates, combined with high levels of immigration, evoked fears of overpopulation among Americans.<sup>8</sup> As the birth rate plummeted during the Great Depression of the 1930s, however, many Americans became more concerned about depopulation.

The picture changed dramatically during the relatively good economic times after World War II: Couples got married and started families at younger ages, and many older mothers had a third or fourth child. Post-war optimism seemed to produce a surge in the birth rate in many countries, but the baby boom was particularly dramatic and sustained in the United States and other English-speaking countries.<sup>9</sup> Between 1946 and 1964, 76 million people were born in the United States, and the TFR rose to a lifetime average of more than three children per woman. More than 4 million babies were born annually between 1954 and 1964 (see Figure 2).

The American fertility boom ended abruptly in the mid-1960s. By the mid-1970s, the TFR had sunk to 1.7, and the annual number of births had bottomed out at nearly 1 million below the baby-boom peaks.

Several reasons have been cited for the decline in fertility in the 1960s and 1970s (see also Box 2, page 8). First, a greater share of women post-

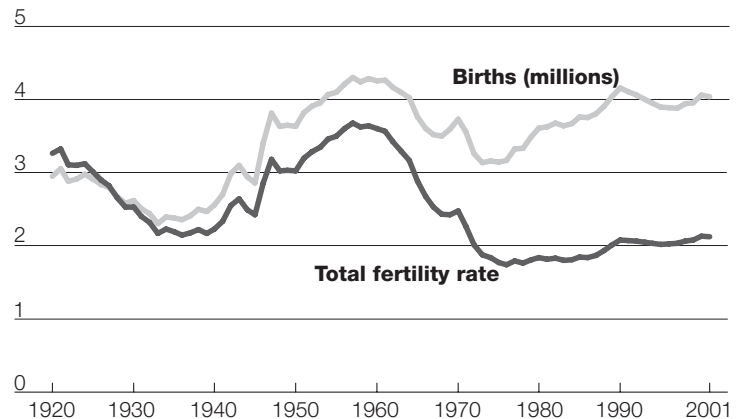
poned marriage and children to attend college and enter the workforce. The median age at first birth for American women rose from 21.8 years in 1960 to 23.0 years in 1980 and to 24.5 years in 1999. This delay meant that women had fewer years to have children once they started a family. As some economists describe the process, the time women spent working or going to school competed with time required for getting married, starting a family, and managing a household. As women completed more education and gained more work experience, their potential earnings increased; leaving the work force to care for children became a relatively more expensive decision because it meant forgoing higher potential income.<sup>10</sup>

Second, contraceptives became more widely available in the 1960s, allowing couples to better plan the timing and number of their children.<sup>11</sup> The oral contraceptive, which some social analysts credit with fueling the sexual revolution and the women's liberation movement, allowed women to space their pregnancies.<sup>12</sup> Male and female sterilization also gained popularity during the 1970s and 1980s, making it easier for couples to limit their family size after they reached the number of children they wanted. In 1995, nearly three-fourths of married American women of reproductive age used an effective contraceptive method, compared with just less than one-half of women in 1965.<sup>13</sup>

A third explanation holds that fertility declined in the 1970s in response to a demographic squeeze created by the huge baby-boom generation. As schools, colleges, and then the job market were overwhelmed by ever-increasing numbers of baby boomers, men's wages fell; women responded by joining the labor force in record numbers and postponing marriage and children. This explanation is rooted in theoretical work on the cyclical nature of fertility in succeeding generations (large generations follow small ones, and

Figure 2

## U.S. Births and Total Fertility Rate, 1920–2001



Note: The total fertility rate is the average total number of children born per woman given current birth rates.

Sources: R. Heuser, *Fertility Tables for Birth Cohorts by Color: United States 1901–1973* (1976); National Center for Health Statistics, *Vital Statistics of the United States, 1969*, vol. I, Natality (1974); and J.A. Martin, M.M. Park, and P.D. Sutton, *National Vital Statistics Report* 50, no. 10 (2002): table 5.

vice versa) and on the relationship between fertility and business cycles.<sup>14</sup>

After the mid-1970s, fertility rates rebounded slightly, hovering around two births per woman in the 1990s and reaching 2.1 births per woman in 2000. The annual number of births also rebounded. It reached 4 million in 1989, the same level attained at the height of the baby boom. The increase in the number of births in the 1980s and 1990s reflected the large number of baby boomers in the childbearing ages.

Why did fertility rebound from the baby-bust lows in the United States and not in most more developed countries? The U.S. TFR, at 2.1, is considerably higher than the average TFR of 1.6 estimated for the more developed countries for 2002. In Japan, Germany, and Italy, the TFR is around 1.3 births per woman (see Figure 3, page 10). In Spain and eastern European countries, fertility is even lower. Remarkably, the TFR may fall below 1.0 in several eastern European countries in coming decades.<sup>15</sup> Even U.S. neighbor Canada is adhering to the European models of extremely low fertility (see Box 3, page 11). In 2002, the TFR



was higher in the United States than in at least 70 other countries, including less developed China, South Korea, and Thailand.

There are a number of possible explanations for the persistence of higher fertility in the United States than in other more developed countries. Some demographers posit that American women are better able to combine jobs and family than are

European or Japanese women. Many social and economic factors in Europe today may encourage women to delay or forgo having children. High unemployment rates frustrate young adults' high expectations for salaries and professional advancement; housing and many other commodities are more expensive in Europe and Japan than in the United States; and work schedules for

### *Box 2*

## **Using Economics to Explain U.S. Fertility Trends**

*by Diane J. Macunovich*

Many Americans attribute the abrupt fall in U.S. fertility after the baby boom to changing attitudes influenced by the “me generation” and women’s liberation and to increases in the cost of raising children. But why did attitudes change, and what caused the costs of having children to increase?

Many factors can influence a couple’s decision to have a child, but a large body of work suggests that economic factors—especially women’s wages and young adults’ relative income—have played a major role in U.S. fertility trends. “Relative income” refers to a person’s earning potential relative to his or her desired standard of living. A couple requires a higher income if they aspire to own a new BMW than if they would be happy driving an older Ford. These preferences are influenced by many factors that cannot be quantified, but economist Richard Easterlin (and my own work) identifies one influential factor that can be measured: the standard of living experienced at home while growing up. People compare what their incomes can buy with the lifestyle their parents’ income sustained when they were living at home.

In this context, relative income is measured as the average earning potential of young adults relative to the average income of families with children. Between 1970 and 1985, relative incomes for American men under age 30 fell dramatically, down 30 percent for white men and 55 percent for African American men. The decline in

relative male income was matched by declines in two factors that influence fertility rates: The proportion of young men in their first few years of work who were married fell by 55 percent, and the fertility rate of women ages 20 to 29 fell by 40 percent.

These three indicators—relative income, proportion of young men married, and birth rates of women in their 20s—tracked one another closely after 1985. Marriage and fertility followed a slight increase in relative income up to about 1991, a decline through the mid-1990s, and recovery thereafter.

Surveys suggest that the ideal family size as envisioned by American teens has been remarkably stable since the 1960s, hovering between 2.0 and 2.5 children. The relative income hypothesis suggests that the fertility decline in the 1970s did not reflect a change in attitudes about ideal family size as much as a change in behavior, as young people’s ideals succumbed to the reality of an unfavorable labor market.<sup>1</sup>

Trends in women’s wages also played a role in fertility trends. Because women have traditionally cared for children, their wages have often been interpreted as the “price of time” spent in child care. As women’s average wage increased—dramatically so between 1968 and 1973—children became more expensive (as an alternative to income), and women postponed or avoided getting pregnant. Fertility rates fell. But when young women’s average wages are rising, the “income effect” of women’s wages is to bring household income

women with children are relatively inflexible.<sup>16</sup>

Another oft-cited explanation for higher American fertility is that the United States is more racially and ethnically diverse than other more developed countries. The largest U.S. minority groups tend to have higher fertility than the white non-Hispanic majority, and foreign-born women tend to have higher fertility than U.S.-

born women. Because minorities and immigrants make up an increasing share of the U.S. population, these racial and ethnic differences may keep fertility at the same relatively high level for decades to come.

But this explains just part of the fertility gap between the United States and other more developed countries. The TFR for non-Hispanic whites was about 1.8 for most of the

closer to the level needed for a couple's desired standard of living.

The income effect of women's wages appears to run counter to the effect of young men's relative income.<sup>2</sup> When male relative income was high (as it was in the 1950s and 1960s), young adults tended to look first to male earnings as the test of income adequacy for child-bearing. More young women were married in the 1950s and 1960s, and thus were able to rely on a spouse's income; fewer women were in the labor force. But now that male relative income is low, fewer women are married, and more women are in the labor force, married women's earnings represent a much larger share of total household income. (Unmarried women rely totally on their own earnings.) Decisions about the number and timing of children rely more critically on women's earning power.

In addition, as women's wages rise, more women can afford to purchase child care, the market responds with more child-care facilities, and the use of paid child care becomes more socially acceptable. Over the past 30 years, rising wages for women provided a buffer for U.S. fertility levels, preventing fertility from falling to the extremely low levels seen in Europe, where women's average wages never increased as sharply as they did in the United States.

A similar phenomenon appears to have emerged in Europe since about 1985. Although female wages are still not as high in Europe as in the United

States, generous child-care and maternity benefits in many countries have greatly reduced the costs of raising children.<sup>3</sup> At the same time, however, relative male income in Europe has remained low and has exerted a strong negative effect on fertility.

What will be the future of U.S. fertility? My research suggests it will respond to women's labor force participation to the extent that women's wages and government institutions encourage combining motherhood and careers, but fertility rates in the United States and Europe will also fluctuate in response to movements in young adults' relative income.

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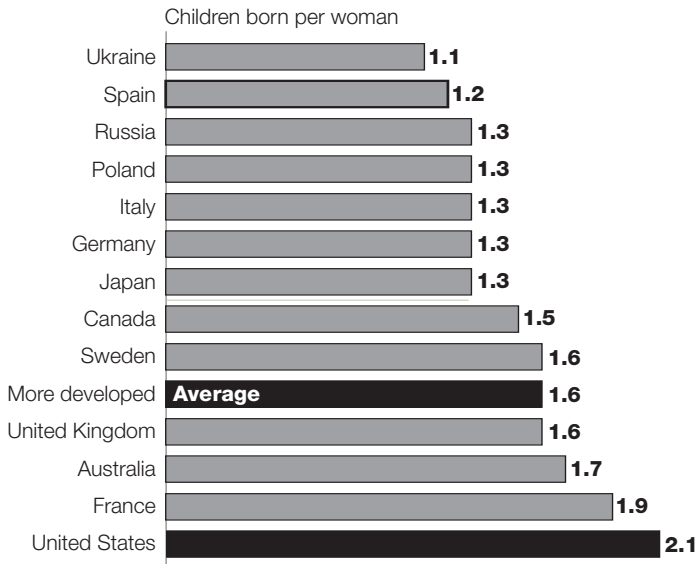
1. Richard A. Easterlin, *Birth and Fortune: The Impact of Numbers on Personal Welfare* (Chicago: University of Chicago Press, 1987).
2. Diane J. Macunovich, "Relative Income and Price of Time: Exploring Their Effects on U.S. Fertility and Female Labor Force Participation," in *Fertility in the United States: New Patterns, New Theories, Population and Development Review*, supplement to vol. 22 (1996): 223-57; and Diane J. Macunovich, *Birth Quake: The Baby Boom and Its Aftershocks* (Chicago: University of Chicago Press, 2002).
3. Fred C. Pampel, *The Institutional Context of Population Change* (Chicago: University of Chicago Press, 2001).

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***Rising wages for U.S. women prevented fertility from falling to extremely low levels.***

Figure 3

### Fertility Rates in the United States and Selected More Developed Countries, 2002



Note: The total fertility rate is the average total number of children born per woman given current birth rates.

Source: C. Haub, 2002 *World Population Data Sheet*.

1990s, and inched up to 1.9 in 2000—lower than the TFR for Hispanics and blacks, but still higher than in other more developed countries.<sup>17</sup>

### Differences by Race and Ethnic Group

In 2001, racial and ethnic minorities contributed 42 percent of all births, although they accounted for just 31 percent of the U.S. population. One reason minorities account for a disproportionate share of births is that a larger proportion of minority women are in their childbearing ages, but minority women also have more children, on average, than non-Hispanic white women. In 2001, the TFR among non-Hispanic whites was 1.9 births per woman, compared with 2.0 among Asian Americans, 2.1 among blacks and American Indians, and 3.2 among Hispanics. At an average of more than three births per woman, the TFR among Hispanics rivals that of the U.S. population in the early 1960s during the tail end of the baby

boom. Among Hispanics, the fertility rate is highest among Mexican Americans, the majority Hispanic group.

While fertility remained around three births per woman for Hispanics between 1991 and 2001, the TFR for black women decreased from 2.5 to 2.1. The number of Hispanics barely exceeded the number of non-Hispanic African Americans in 2000, but the number of births to Hispanic women has outnumbered births to non-Hispanic black women since 1993. Births just to Mexican American women are likely to outnumber African American births within a few years.

Why are fertility rates higher among some racial and ethnic groups? The reasons are not clear, but differences in educational attainment are probably a key factor. Hispanics have the lowest average educational attainment and the highest average fertility rate of U.S. racial and ethnic groups. Asians and non-Hispanic whites have the highest educational attainment and the lowest fertility. Immigration, especially of Hispanics, is another important factor. Most Hispanic immigrants come from countries where families tend to have several children, while most U.S.-born Americans expect to stop at two children.<sup>18</sup>

Many demographers assume that the fertility rates of different racial and ethnic groups, and of immigrants and native-born populations, will move closer together as the groups interact and adopt similar expectations about family size and lifestyles.<sup>19</sup> But there is no timetable for such a convergence, nor is there a guarantee that it will occur. African Americans have long had higher fertility rates than whites, though the ups and downs have been similar: African American fertility rose higher than white fertility during the baby boom, and it followed a similar abrupt decline in the late 1960s. The fertility gap between black and white Americans has narrowed somewhat since 1993, but it is not clear whether this signals that the gap will eventually close. Also, continued immigration from Central America and other

## Diverging Mortality and Fertility Trends: Canada and the United States

by Barbara Boyle Torrey and Carl Haub

Canada and the United States share a long land border and similar popular cultures. They are major trading partners and have fought in many of the same military conflicts overseas. Both countries are leading immigration countries, with the foreign-born population making up increasing percentages of their total populations.

With so much in common, it is somewhat surprising that fertility and mortality trends have recently followed different paths in the two countries. Canada's demographic trends are becoming more like those in Europe than the United States. This divergence between the United States and its closest industrialized neighbor highlights how different the United States is from other more developed countries.

Fifty years ago, Americans could expect to live longer than Canadians. The United States has made major improvements in health and average life expectancy since then, but Canada has made even greater strides. The U.S. advantage began to disappear in the 1950s and 1960s, and by 2001, a newborn Canadian infant could expect to outlive a newborn American by two years, and an American white infant by 1.5 years.

The reasons for this mortality gap are not easily explained. The major causes of death are the same in both countries: cancer and circulatory diseases, such as heart diseases and strokes. Both countries have similar cancer mortality rates, but heart disease and stroke are more deadly in the United States: Two-thirds of the excess deaths in Americans, both men and women, are caused by heart and other circulatory diseases after age 30.<sup>1</sup>

The differences between Canadian and U.S. fertility rates are even larger than the differences in life expectancy. In 2000, Canada's total fertility rate was just 1.5 children per woman, compared with the United States' rate of 2.1. Canada's fertility is more in line with that of Europe, Japan, and Australia than that of the United States.

This gap in fertility rates between Canada and the United States is surprising because Canada has historically had higher rates. In 1945, Canadian women had a higher TFR than American women (3.0 and 2.5, respectively). Each country had a major baby boom after World War II, and Canada's boom was bigger. In both countries, fertility rates peaked around 1959: Canada at 3.9 and the United States at

3.7. The TFRs in both countries declined to about 1.8 in 1977, but the Canadian rate never recovered from the baby bust, while the U.S. rate edged back up to 2.1.

Why is Canadian fertility lower than U.S. fertility? Minority populations in the United States—especially Hispanic immigrants—have higher fertility rates than many of the minority groups in Canada. However, the higher fertility rates of blacks and Hispanics by itself would explain only about 40 percent of the differences in total fertility rates.<sup>2</sup>

Both countries experienced similar social changes in the second half of the 20th century. Levels of education increased, as did women's labor force participation. Marriage rates declined and the age of first marriage increased. Common-law unions became widespread in both countries, although they were almost twice as prevalent in Canada as the United States.<sup>3</sup> Yet there appear to be subtle cultural differences between the two countries that make Canada look demographically much more like its European peers in both life expectancy and fertility. These comparisons suggest that the United States will have a unique demographic future, unlike its northern neighbor, who resembles the rest of the more developed world.

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3. In 2001, 14 percent of Canadian couples were in common-law unions. In comparison, 8 percent of U.S. couples were in common-law unions in 2000. Statistics Canada, 2001 Canadian Census ([www12.statcan.ca/englihs/census01/release/index.cfm](http://www12.statcan.ca/englihs/census01/release/index.cfm), accessed Nov. 12, 2002); and U.S. Census Bureau, personal communication, November 2002.

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***Minorities  
accounted for  
97 percent of  
the increase in  
the under-18  
population  
from 1990 to  
2000.***

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*Hispanic women have about three children each, about one child more than women in other U.S. racial and ethnic groups.*

higher fertility regions is likely to perpetuate higher Hispanic fertility. Over time, the higher fertility rates among minorities will contribute to larger cohorts of minority women of child-bearing age, so that population momentum in future generations will further increase the number of minority births relative to non-Hispanic white births.

The long-standing differences in fertility rates between ethnic and racial groups are molding the future racial and ethnic makeup of the United States. Between 1990 and 2000, the U.S. population under age 18 increased from 63.6 million to 72.3 million, the largest numerical gain since the 1950s. Minorities accounted for 97 percent of this increase.<sup>20</sup> These trends appear to ensure that minorities will increase their share of the U.S. population, but predictions are tricky. Increasing numbers of unions between Americans of different racial and ethnic groups are resulting in more children of mixed racial heritage, and it is impossible to

know how these children will choose to identify themselves once they are grown. Racial and ethnic definitions are relatively fluid and depend in part on how people perceive themselves and how they are perceived by society.

If racial and ethnic definitions remain the same and immigration, fertility, and mortality patterns are constant, minority groups will continue to grow faster than the nonminority population. The share of non-Hispanic whites in the U.S. population fell from 80 percent in 1980 to 69 percent in 2000. According to the most recent Census Bureau projections, non-Hispanic whites will make up barely one-half of the population by 2050, while the Hispanic share is likely to grow to one-fourth from one-eighth in 2000.<sup>21</sup>

### **Up, Down, or Steady**

Will U.S. fertility remain above that of other more developed countries? Since demographers cannot foretell the future, they tend to project the current levels and trends into the future. But while the TFR is a useful indicator of how people's actions this year will affect population growth, it is not a good indicator of their actions in the future, as demonstrated by population projections developed during the U.S. baby boom, when the TFR was about 3.5. In 1964, the Census Bureau forecast that the TFR would range between 2.5 and 3.5 from 1975 to 2000.<sup>22</sup> While the demographers anticipated some fertility decline, they did not foresee the TFR dipping to 1.7 in the 1970s, or remaining below 2.2 for the rest of the century. Accordingly, the population projected for 2000 under the lowest fertility assumption was 291 million—about 10 million above the actual number. Under the highest fertility assumption, the 2000 population was projected at 362 million—81 million above the actual number.

The Census Bureau does not forecast a substantial change in fertility rates in the United States over the next 50 years. The country's TFR may

increase slightly as the non-Hispanic white share of the childbearing population decreases, but the TFRs for Hispanics and other minorities with higher fertility may decline, reducing the gap. The most recent national projections assume the U.S. TFR will rise slightly, from about 2.1 in 2000 to 2.2 before 2050.

Some demographers also project a slight increase in European fertility, which could narrow the fertility gap between the United States and other more developed countries.<sup>23</sup> But the increases projected for Europe by the U.S. Census Bureau, the European Union, and the United Nations show TFRs rising to about 1.7 or 1.8 before 2050, which is still below the TFR projected for the United States.

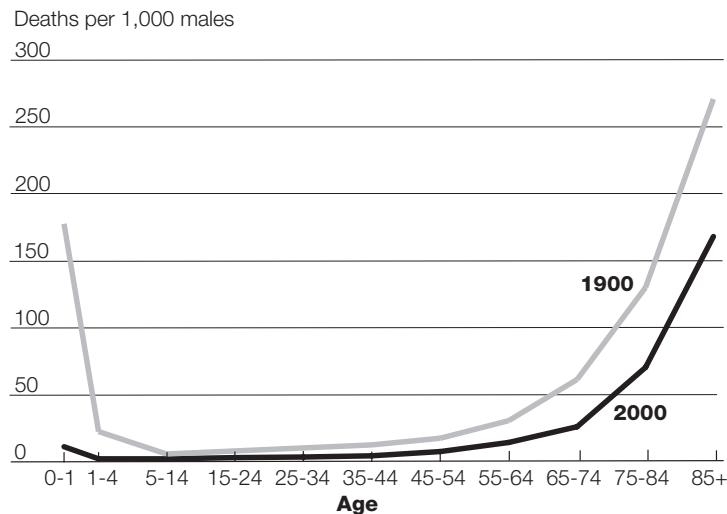
## Health and Mortality

Mortality is the counterpoint to fertility in the demographic equation (see Box 1, page 6). Population change is affected by the ages at which people die as well as by the number who die. Deaths among the young have a greater effect because they remove potential parents from the population. Deaths among the working-age population remove breadwinners who support children and, sometimes, elderly parents. Most deaths occur among the elderly, however. Because survival at older ages has improved, the average age at death for the older population has increased.

Although mortality levels vary from one country to another, the U.S. pattern of deaths by age is similar in other more developed countries. The first months of life are the most dangerous: Serious birth defects or complications related to the mother's pregnancy or the delivery can claim a newborn's life within hours or weeks of birth. The chances of survival improve remarkably after infancy, so most children have a very low risk of death until they enter their teenage years. Teenagers and young adults face greater chances of dying from injuries or violence; young men are

Figure 4

### Death Rates by Age for U.S. Males, 1900 and 2000



Sources: U.S. Census Bureau, *Sixteenth Census of the United States: 1940, Vital Statistics Rates in the United States, 1900-1940* (1943): table 5; and A.M. Miniño et al., *National Vital Statistics Report* 50, no. 15 (2002): table 5.

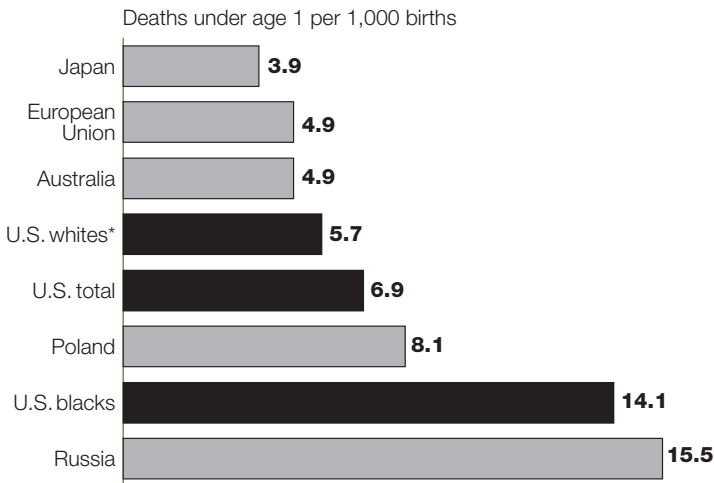
especially vulnerable because they are more likely to engage in risky behavior. Still, the prognosis is excellent for reaching middle age: 98 percent of 20-year-olds live until their 40th birthday. Only after age 60 or so do death rates begin a steep ascent, as shown for men in Figure 4.

The United States and most more developed countries saw impressive gains in infant and childhood survival during the first half of the 20th century. Around World War I, one in 10 U.S. babies died during their first year of life. By the 1950s, cleaner drinking water, better sanitation and food preservation, improved nutrition, and the introduction of antibiotics helped babies and young children survive the most lethal health threats. At mid-century, fewer than one in 30 babies died in their first year. In 2000, fewer than one in 145 babies died before their first birthday; in other words, more than 99 percent of children survived infancy.

Some demographers maintain that preventable causes of infant and childhood mortality are well controlled in more developed countries and that infant and child mortality

Figure 5

## Infant Mortality Rates in the United States and Selected More Developed Countries, 2000



\*Non-Hispanic

Note: The European Union in 2002 included Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

Sources: J.P. Sardon, *Population* 57, no. 1 (2002): 132-33; A.M. Meniño et al., *National Vital Statistics Report* 50, no. 15 (2002): 12-13; and Eurostat, *Demographic Statistics 2001* (CD-ROM): table G-6.

rates may be close to a minimum. But U.S. infant mortality rates are higher than those in most other more developed countries (see Figure 5), which suggests that U.S. rates could fall further, especially among African Americans. Some analysts point out that the infant mortality rate for white Americans—5.7 deaths per 1,000 births in 2000—is just above Western European levels. The infant mortality rate for blacks born in 2000, however, was more than twice that of whites: 14.1 deaths per 1,000 births. The higher mortality for African American babies has been attributed to inadequate prenatal care for the mother, as well as to socioeconomic factors that undermine maternal and child health.<sup>24</sup> Child poverty rates are much higher among African Americans than among whites, and are much higher in the United States than in any other more developed country.<sup>25</sup>

The improvement in child health and survival in the 20th century contributed to U.S. population growth primarily by allowing more children to

live to adulthood and start their own families. The most dramatic improvements occurred in the first half of the century, as families benefited from better nutrition and living conditions. In 1900, about 72 percent of newborns survived to age 30; by 1950, almost 95 percent did. This figure reached nearly 98 percent in 1999.<sup>26</sup>

As infant mortality continued to decline, improved management of heart disease, declines in smoking, and other factors also helped reduce mortality for American adults. Mortality rates fell faster for women than for men for most of the 20th century, which widened the gender gap in life expectancy. In 1900, women lived about two years longer than men, on average. This gap expanded to nearly eight years by 1975, but then narrowed as mortality declines slowed for adult women.<sup>27</sup>

Experts disagree about how much more average life expectancy can rise in the United States and other countries. Many see life expectancy eventually reaching an upper limit of perhaps 85 years, determined by biological factors; others hold open the possibility that medical advances could extend average life expectancy well beyond today's levels.<sup>28</sup> Average life expectancy has continued to rise in most industrialized countries. It is highest in Japan: In 2000, average life expectancy at birth was 77.7 for men and 84.6 for women.

Life expectancy does not necessarily improve over time. Contrary to the general trend, life expectancy has not been increasing in many countries of eastern Europe and the former Soviet Union. Life expectancy in Russia fell during the 1990s, because of deteriorating public health and economic conditions and the prevalence of unhealthy lifestyles, including alcohol and drug abuse and smoking.<sup>29</sup>

## Preventable Deaths

Even at the current low mortality levels, there are many preventable deaths in the United States. Deaths are considered premature when they

strike people younger than age 75, which is roughly the average life expectancy. Premature mortality has the greatest impact on population growth, because it can remove potential parents from the childbearing ages. The extent of premature mortality, often measured as years of potential life lost (YPLL), was estimated at nearly 8,000 years per 100,000 Americans under age 75 in 1999. The three leading causes of premature mortality—cancer, heart disease, and injury—together accounted for 53 percent of the years lost before age 75 in the United States. But there are striking differences in premature mortality between men and women and among racial and ethnic groups. The YPLL for African Americans, for example, was nearly twice that for non-Hispanic whites in 1999.<sup>30</sup>

Except at the oldest ages, black Americans have higher death rates and more premature mortality than whites. This gap is associated with African Americans' lower economic status, educational attainment, and occupational status relative to whites, because socioeconomic status is related to health. But racial differences in mortality persist even in studies that compare individuals with similar levels of income and education.<sup>31</sup> The disadvantage for blacks appears for all the major causes of death, but it is especially stark for homicides and HIV-related deaths: For the population ages 25 to 34, the risk of dying from HIV/AIDS or homicide is 11 times higher for non-Hispanic blacks than for non-Hispanic whites.

Eliminating these and other disparities is an explicit health policy goal of the United States. If the higher death rates for minorities were reduced, U.S. infant mortality rates and average life expectancy would edge closer to those of other industrialized countries.<sup>32</sup>

### Reducing Injury Deaths

Injury mortality is a major cause of premature death for all population groups. According to one estimate, eliminating injury mortality would add

Table 3

### Deaths From Violence and Other Injuries Among Men Ages 15 to 24, United States and Selected More Developed Countries, 1997

Country	Deaths per 100,000 men ages 15 to 24			
	All causes	Homicide <sup>a</sup>	Suicide	Accidents <sup>b</sup>
Canada	86.9	3.6	22.4	39.6
France (1996)	91.4	5.5	12.8	47.2
Germany	83.7	3.6	12.9	43.4
Italy (1995)	91.0	3.2	7.3	49.0
Japan	57.7	1.4	11.9	27.9
Russia	285.7	58.6	53.2	109.0
United Kingdom	76.2	8.7	11.1	29.7
<b>United States</b>	<b>124.0</b>	<b>29.8</b>	<b>18.4</b>	<b>52.1</b>

<sup>a</sup>Includes deaths from other violence.

<sup>b</sup>Unintentional injuries.

Source: World Health Organization, *1997-1999 World Health Statistics Annual* ([www3.who.int/whosis/whsa/whsa\\_table1.cfm](http://www3.who.int/whosis/whsa/whsa_table1.cfm), accessed Sept. 23, 2002): table 1.

more than a year to the average U.S. life expectancy.<sup>33</sup> Because they are a leading cause of death for young children, teens, and young adults, injuries disproportionately affect population growth. Injury experts assert that most injuries could be prevented through public health measures and safer commercial products. Improved vehicle safety (especially the introduction of seat belts and air bags), better highway design, and tougher enforcement of traffic laws reduced deaths on U.S. highways in recent decades, for example, even though there were more cars on the roads. Public health actions could also help prevent suicides and reduce firearm deaths, which could further lower injury deaths. Among young men, rates of homicides and other violent deaths are sharply higher in the United States than in other more developed countries except the former Soviet Union, while death rates for suicide and unintentional injuries are closer to those in other countries (see Table 3).

### Smoking and Obesity

Two other leading causes of premature death are also related to lifestyle and individual behavior: tobacco use and obesity. The U.S. Centers for Disease Control and Prevention (CDC) estimates that tobacco use



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*Healthy diets, along with regular exercise, help prevent deaths from diabetes, heart disease, and a growing list of other causes.*

was implicated in one in five U.S. deaths in the 1990s. Smoking can lead to death from heart disease, stroke, several forms of cancer, and lung disease; pregnant women who smoke have a greater chance of miscarriage; and babies born to mothers who smoke during pregnancy face an elevated risk of dying in infancy.<sup>34</sup> The CDC also stresses that tobacco use exacts heavy economic and social costs in terms of higher health insurance rates, lost productivity, and chronic health problems.

Beginning with a 1964 landmark U.S. Surgeon General's report, the health risks of smoking tobacco have been publicized throughout the United States. State and local governments have supported antismoking campaigns and smoke-free public spaces. The percentage of adults who smoke plummeted from about 42 percent in 1965 to 25 percent in 1990. But the decline has slowed: In 2000, 23 percent of Americans age 18 or older smoked, still well above the 12 percent goal set for 2010 by the U.S. Department of Health and Human Services (DHHS). Smoking has also declined among the Europeans and Japanese, although it tends to be above the U.S. level.

About one-third of adults smoke regularly in Japan, France, Germany, and other European countries.<sup>35</sup>

Smoking patterns have shifted over time. In the early 1900s, for example, American women rarely smoked cigarettes, but by the 1960s, women's rates were nearly as high as men's. Among U.S. Asians and Hispanics, men were more likely than women to smoke in 2000, but the reverse was true for American Indians and Alaska Natives. Overall, smoking was most prevalent among American Indians and Alaska Natives and among white non-Hispanics; it was least prevalent among Asian Americans and Hispanics.

While smoking has declined among adults, the percentage of American high school students who smoke rose from about 28 percent in 1991 to 36 percent in 1997. This trend worries public health experts because people who begin smoking in adolescence have the most trouble giving it up later. The most recent survey data show a decline in teenage smoking, to 29 percent in 2001, but this rate is still well above the DHHS goal of reducing teen smoking to 16 percent by 2010.<sup>36</sup>

Obesity is gaining attention as a preventable health problem implicated in deaths from heart disease, stroke, diabetes, and a growing list of other health problems. Obesity has a genetic component, but it is closely linked to diet, lifestyle, and other health conditions. The percentage of Americans who are overweight or obese has increased since the late 1980s; the increase was especially sharp among children (see Box 4). Blacks are more likely than whites or Hispanics to be obese, and black women are at an especially high risk.<sup>37</sup> The higher rates of obesity among African Americans may contribute to the lower life expectancy for blacks.

The United States clearly has low mortality by world standards. In 2002, the U.S. average life expectancy at birth was 10 years higher than the world average and nearly 30 years above the average for sub-Saharan

## Obesity in the United States: Reaching a Critical Mass

by Allison Tarmann

In September 2002, the National Center for Health Statistics announced that U.S. life expectancy in 2000 had hit an all-time high: nearly 77 years. The following month, the U.S. Centers for Disease Control and Prevention reported that obesity had also reached an all-time high, which threatens to diminish the gains in life expectancy.

In 2000, 31 percent of U.S. adults were obese—a 35 percent increase since 1994.<sup>1</sup> Fifteen percent of children ages 6 to 11 were overweight—triple the level in 1974 (see Figure A). The obesity epidemic is raging in other countries as well (see Figure B).

What is the connection between life expectancy and obesity? Each year, an estimated 300,000 U.S. adults die of obesity-related causes. Obesity has been linked to increased rates of heart disease, cancer, and diabetes, which rank as the first, second, and sixth causes of death in the United States, respectively. Chronically overweight children face a num-

ber of long-term health problems and a heightened risk of developing blindness, kidney problems, and heart disease by the time they turn 30.<sup>2</sup> Black Americans, who are at greater risk of obesity than whites, also face a higher risk of death from diabetes and other diet- and weight-related illnesses.

George L. Blackburn, chairman of nutrition medicine at Harvard Medical School, recently told the *Washington Post*, “We are totally losing the battle to prevent and treat obesity,” and unless efforts are redoubled for early identification and early prevention of excessive weight gain, “we are going to have the first generation of children who are not going to live as long as their parents.”<sup>3</sup>

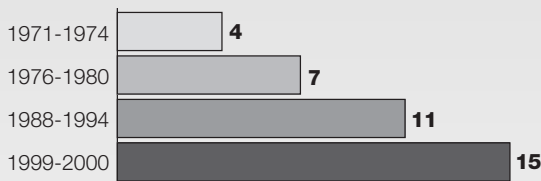
A recent report by the U.S. Institute of Medicine (IOM) recommends policy changes that could temper this negative trend by promoting healthier lifestyles. The most controversial recommendation is that individuals should engage in one hour of physical activity a day to balance their energy (calorie) intake and expenditure. That advice roughly doubles previous recommendations from the U.S. Surgeon General.

What policy changes may emerge when agencies such as the National Institutes of Health implement the report’s recommendations? Benjamin Caballero, director of the Center for Human Nutrition, Johns Hopkins University, anticipates changes in food labeling practices, school lunch requirements, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

George A. Brooks, University of California-Berkeley professor and IOM panel member, spoke of the need for a national strategy and of the importance of physical education in schools. “We need to think about the curriculum in the schools so that kids will get the skills to be active and learn how to be active and like it.”<sup>4</sup>

Figure A

### Percent of American Children Who Are Overweight, Selected Years

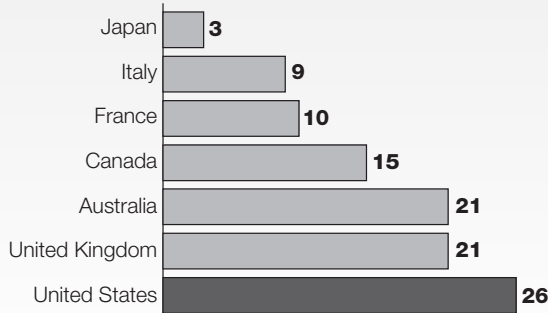


Note: Children with a body mass index (BMI) at or above the 95th percentile of the sex-specific BMI growth charts are considered overweight.

Source: National Center for Health Statistics (NCHS), *NCHS Health E-Stats* ([www.cdc.gov/nchs/products/pubs/pubd/hstats/over99.htm](http://www.cdc.gov/nchs/products/pubs/pubd/hstats/over99.htm), accessed Oct. 18, 2002).

Figure B

### Percent of Adults Who Are Obese, Selected Countries, 1998–2000



Note: Obesity is defined as a body mass index (BMI) of 30 or higher.

Source: Organization for Economic Cooperation and Development (OECD), *OECD Health 2002* ([www.oecd.org/](http://www.oecd.org/), accessed Oct. 18, 2002).

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## Foreigners Entering the United States: Definitions and Numbers

*Most foreigners visit the United States legally without visas.*

Everyone in the United States is defined by law as either a citizen or an alien. Aliens are citizens of another country. Under U.S. law, aliens may stay in the United States legally as immigrants, refugees or asylees, or nonimmigrants (such as tourists or foreign students). If they do not fall into one of these legal categories, they are considered unauthorized or undocumented.

Immigrants are citizens of other countries who have been granted a visa that allows them to live and work permanently in the United States and to become naturalized U.S. citizens. Foreigners may apply to enter the United States under family-unification, employment-preference, and miscellaneous other categories. The chances of obtaining a visa and the wait for admission vary tremendously.

Refugees and asylees are aliens who left their home countries under threat of persecution because of their race, religion, nationality, membership in a particular social group, or political opinion. Refugees usually apply to enter the United States from a third country, after they leave home. Asylees enter the United States first under a temporary visa—or illegally—and then request safe haven. The number of refugees admitted is determined annually by the president in consultation with Congress. In Fiscal Year (FY) 2001, the target for resettling refugees in the United States was 70,000. In FY2000, 128,200 people applied for asylum, but 88 percent of those applications were rejected. Refugees and asylees shift to immigrant status after a year of residence.<sup>1</sup>

Nonimmigrant visa holders are people who are granted temporary entry into the United States for a specific purpose, such as visiting, working, or studying. About 90 percent of the nonimmigrants who enter the United States each year are tourists, but there are 20 types of nonimmigrant visas. These include A1 visas for ambassadors, B2 visas for tourists, P1 visas for foreign athletes who play on U.S. sports teams, and TN visas for Canadians and Mexicans entering the United States to work under the provisions of the North American Free Trade Agreement

(NAFTA). Most foreigners visit the United States legally without visas. The Visa Waiver Program, for example, permits visitors from 26 countries, mostly in Europe, to enter without visas for up to 90 days if their country admits Americans without visas. About 26 million foreigners entered the United States under the Visa Waiver Program in 2000; another 8 million foreigners entered with visas.

Unauthorized or undocumented migrants are foreigners in the United States without a valid visa. About 60 percent of the unauthorized migrants in the United States are believed to have slipped across the Mexico-U.S. border without inspection by immigration control personnel. The other 40 percent entered the United States legally, often as tourists, and then violated the terms of their entry by staying too long or taking paid work.

Migration expert Jeff Passel estimates there are at least 8.5 million undocumented foreigners in the United States.<sup>2</sup> Three-quarters of the unauthorized foreigners are from Latin America; more than one-half are from Mexico alone.

Undocumented immigrants tend to settle in the same states as legal immigrants. A 1996 INS study estimated that 40 percent lived in California and another 43 percent in Texas, New York, Florida, Illinois, New Jersey, and Arizona. An estimated 6 percent of California residents and 4 percent of Texas residents are thought to be undocumented foreigners.<sup>3</sup>

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*Adapted from Philip Martin and Elizabeth Midgley, "Immigration to the United States," Population Bulletin 54, no. 2 (1999): 8-9.*

Africa.<sup>38</sup> Yet the United States has higher mortality rates than many other industrialized countries. The United States could reduce death rates further by eliminating the gap between racial groups—especially among blacks and whites—and by targeting behaviors—such as unhealthy diets, sedentary lifestyles, and smoking—that lead to chronic health problems and premature deaths.

The Census Bureau expects continued improvement in U.S. mortality between 2000 and 2050. The infant mortality rate is projected to fall from about 7 deaths per 1,000 births in 2000 to 3 deaths per 1,000 by 2050. Life expectancy at birth is projected to increase to 83.6 years (81.2 for males and 86.6 for females).<sup>39</sup> If these forecasts are correct, the United States may close the mortality gap with other more developed countries. Although mortality is expected to decline further in these countries as well, the infant mortality rates may converge around 3 deaths per 1,000 births—about the same as forecast for the United States.

There may be more national variation in life expectancy at birth in the mid-21st century, partly because the level reflects health risks at every age. National differences in injury mortality for young adults or HIV/AIDS deaths among middle-aged adults can affect the average life expectancy. The predicted average for 2050 ranges between 82 and 84 years for more developed countries outside eastern Europe, according to the Census Bureau.<sup>40</sup> The average is slightly higher in Japan and lower in most eastern European countries. If the United States reduces preventable deaths, especially among minorities, U.S. life expectancy may match the highest levels in the 21st century.

## Immigration

Immigration is a major contributor to U.S. population growth, and its importance has increased as fertility among U.S.-born women has remained at or

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*Immigrants contributed one-half of the new entrants to the U.S. labor force in the 1990s and one-quarter of new entrants in the 1980s.*

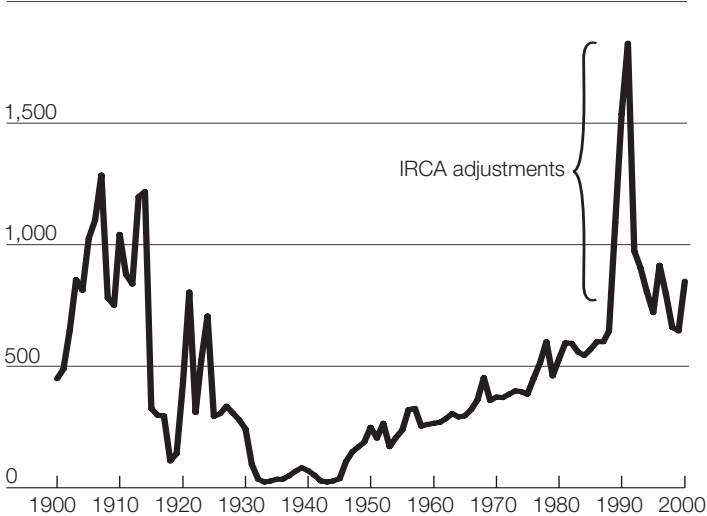
below the replacement level of two children per woman. Immigration accounted for about one-third of U.S. population growth in the 1980s and for an increasing share during the 1990s. Between 2000 and 2001, immigration contributed about 40 percent of growth, as shown in Box 1 (page 6). Some analysts credit immigration with an even greater share of growth because of children born to immigrants after arrival in the United States.<sup>41</sup> About one-fifth of the babies born in 2000 had a foreign-born mother.<sup>42</sup> Immigrants and their children contribute to the relatively young age structure of the United States and therefore to continued population growth. Recent U.S. immigrants also add racial, ethnic, and cultural diversity: An overwhelming share come from Asia and Latin America.

International migration occurs when people move their place of usual residence to a location across a national boundary. Migration is the most volatile demographic variable, and net migration is the most challenging component of population change to measure. Nearly every birth and death is recorded by state agencies, but movements across

Figure 6

## Immigration to the United States, 1900–2000

Immigrants in thousands  
2,000



Note: IRCA adjustments refer to the amnesty provisions of the Immigration Reform and Control Act of 1986, under which 2.7 million unauthorized foreign U.S. residents obtained legal immigrant status.

Source: U.S. Immigration and Naturalization Service, *2000 Statistical Yearbook of the Immigration and Naturalization Service* (2002).

national borders are not as easy to record. The U.S. Immigration and Naturalization Service (INS) logged more than 30 million entries by foreigners in 2000. Most such travelers are tourists—only a small percentage came to settle in the United States. Although most foreigners are here only a few days or weeks, they are not tracked closely once they are in the country, and some fail to leave when their visas expire. Several thousand more are thought to enter each year without inspection (see Box 5, page 18). People moving out of the country—the emigration component—are even harder to track because the government records border entries but not exits. The Census Bureau estimated emigration at about 215,000 for 2001.<sup>43</sup>

Immigration waxes and wanes in response to political and economic conditions that cannot be predicted. The peaks and valleys of legal immigration into the United States since 1900 (see Figure 6) correspond with specific events such as world wars, economic crises such as the Great Depression,

and legislation that encouraged or restricted immigration. But underlying these events are conditions in the sending countries that lead people to leave their homelands for what they perceive as a better life in the United States. Networks formed by earlier immigrants from the same country provide newcomers with information about U.S. jobs, housing, and travel and establish important links between sending and receiving communities. The push and pull forces that govern immigration also affect the emigration of people who failed to find a job or to secure legal status.

The United States limits the number and type of immigrants admitted for permanent residency, but the categories and limits are complicated and subject to change. Immigrants may enter the United States through four basic gateways. The first is family unification or family preference. About 68 percent of immigrants admitted between 1995 and 2000 passed through this gate (see Table 4). Immediate relatives of U.S. citizens—including children adopted abroad—(see Box 6, page 22) enter without restriction, but other relatives of U.S. citizens or of permanent residents are subject to annual numerical limits and often wait years before they receive immigrant visas.

The second gateway is for immigrants admitted for economic or employment reasons. Employment-based immigration includes workers with special skills or abilities in the arts or sciences, business executives, clergy, and wealthy investors, as well as farm laborers and other low-skilled or unskilled workers. The families of these workers pass through the same gate. Between 1995 and 2000, 12 percent of legal immigrants entered under employment-preference categories.

The third major gateway is for refugees and asylees who are granted safe haven in the United States because they face persecution or personal danger in their home countries. About 11 percent of immigrants admitted from 1995 to 2000 were refugees and asylees.

The fourth gateway admits foreigners under other miscellaneous cate-

gories, predominantly as diversity immigrants. Through an annual lottery, the diversity category admits about 50,000 immigrants annually from underrepresented countries, especially in Europe and Africa. Between 1995 and 2000, about 6 percent of immigrants entered under diversity and other miscellaneous categories.<sup>44</sup>

Between 1995 and 2000, an average of about 770,000 people were granted legal resident status each year. About half of these people were already living in the United States when they gained legal permanent residency. The card that identifies permanent residents used to be green, and such immigrants are often still referred to as “green-card holders.”

Changes in laws and procedures and processing backlogs contributed to fluctuations in the recorded entry of legal immigrants in the 1990s and the early 2000s. The sharp increase in the number of legal immigrants between 1989 and 1992, for example, resulted from the legalization of 2.6 million people, mostly Mexican nationals, who were already living in the United States without proper documentation; the spike does not represent a surge of new immigrants during those years. Likewise, a backlog of applications in the late 1990s caused fluctuations in the annual figures, as shown in Figure 6. The INS reported that 1 million change-of-status applications were still pending in October 2000.

## Nonimmigrants

Nonimmigrants who enter as temporary workers or students often contribute to permanent immigration, according to immigration experts Philip Martin and Elizabeth Midgley.<sup>45</sup> In 2000, nearly 137,000 people were granted H1-B visas to work in the United States for three years, with a potential for a three-year extension. About 44 percent were already living in the United States under another nonimmigrant status. More than one-half of H1-B visa holders in 2000 were

Table 4

### U.S. Immigrants and Nonimmigrants by Type and Selected Class of Admission, 1995–2000

Category	Number	Percent
<b>Total immigrants</b>	<b>4,585,565</b>	<b>100.0</b>
New arrivals	2,348,629	51.2
Adjustments	2,236,936	48.8
<b>Family-based admissions</b>	<b>3,120,890</b>	<b>68.1</b>
Family-sponsored immigrants	1,389,270	30.3
Immediate relatives of U.S. citizens	1,731,620	37.8
<b>Employment-based admissions</b>	<b>534,800</b>	<b>11.7</b>
<b>Refugees and asylees</b>	<b>516,373</b>	<b>11.3</b>
<b>Other immigrants</b>	<b>400,668</b>	<b>8.7</b>
Diversity immigrants	291,921	6.4
<b>Nonimmigrants</b>	<b>142,793,806</b>	<b>100.0</b>
Temporary visitors (business and pleasure)	130,642,818	91.5
Students and families	2,757,128	1.9
Temporary workers/trainees and families	2,222,641	1.6
Specialty occupations (H1-B visas)	1,160,910	0.8
<b>Other</b>	<b>7,171,219</b>	<b>5.0</b>
Exchange visitors and families	1,460,922	1.0
Intracompany transferees and families	1,463,055	1.0
Foreign government officials and families	619,541	0.4

Source: U.S. Immigration and Naturalization Service, *2000 Statistical Yearbook of the Immigration and Naturalization Service* (2002): tables 4 and 37.

from India, had at least an undergraduate degree, and worked in information technology. Many had brought their spouses and children to live in the United States. H1-B visa holders are officially temporary residents but may live with their families in the United States for many years.

Nearly 660,000 foreign students and their families entered the United States in 2000 to attend schools and universities. The Institute of International Education reports that international student enrollment in U.S. community colleges and universities has increased steadily and sharply in recent decades.<sup>46</sup> Some of these students and their families stay for many years and eventually shift to another immigrant or nonimmigrant status.

## Immigration Effects

Immigration is an agent of change: It affects the demographic, economic, and social characteristics of a population as well as its size. People generally move to another country when they

## International Adoptions

by Allison Tarmann

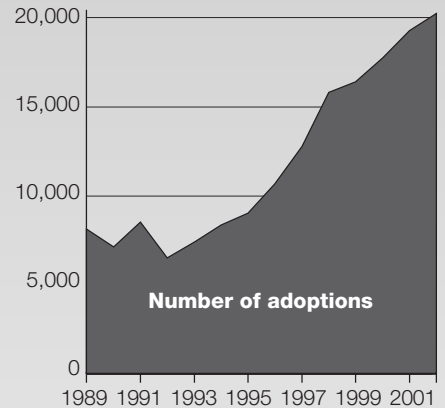
The United States adopts more children from abroad than any other country. The number of foreign children adopted by U.S. parents has increased sharply, and nearly doubled during the 1990s (see Figure A). At just over 20,000 in Fiscal Year 2002—less than 5 percent of legal immigrants—international adoptees add relatively little to national population growth, but they contribute to the United States' racial and ethnic diversity and links to foreign countries. And because many adopted children come from a different racial or ethnic background than their American parents, they contribute to the blurring of racial and ethnic boundaries.

One reason for the rise of international adoptions is the dwindling supply of adoptable children within the United States.<sup>1</sup> Increased access to contraception, the availability of legal abortion, decreases in the teen birth rate, and reduced social stigma surrounding unmarried parenting are among the reasons that there are fewer U.S.-born children available for adoption. Some demographers also point to the postponement of marriage and childbearing as fueling the demand for adopted children. Women in their 30s or 40s are more likely to encounter problems getting pregnant and carrying a pregnancy to term than younger women, and some turn to adoption to have the child they want.

Unmarried American mothers are no longer a common source of children for adoption. Although the percentage of births to unmarried women has increased dramatically since the 1970s, and accounted for one-third of all U.S. births in 2000, many unmarried mothers now keep their children or transfer their children's legal custody to relatives rather than put them up for adoption. Young teenage mothers are less likely to keep their babies, but the birth rate for young teens has fallen steadily since 1991, according to the National Center for Health Statistics.

Another reason why many parents are looking abroad for children is that adopting within the United States is

*Figure A*  
**Number of International Adoptions by U.S. Parents, Fiscal Years 1989–2002**



Source: U.S. State Department, "Immigrant Visas Issued to Orphans Coming to the U.S." ([www.travel.state.gov/orphan\\_numbers.html](http://www.travel.state.gov/orphan_numbers.html), accessed Nov. 12, 2002).

legally complicated, slow, and costly. Public adoptions through the foster care system are less prone to legal snarls but are much slower, making it difficult to adopt children while they are still infants. Less than 2 percent of children adopted through the foster care system in 1998 were infants, compared with 46 percent of children adopted from abroad.<sup>2</sup>

Georgia Deoudes, director of policy for the Evan B. Donaldson Adoption Institute, sees other reasons that prospective parents turn to international adoption. For one thing, she said, "There seems to be some idea among prospective adoptive parents that adopting internationally is somehow easier or less expensive. That isn't, in fact, true."<sup>3</sup> A more likely motivation is that international standards for adoptive parents are in some ways more lenient. Older couples and single adults who might be rejected by private U.S. adoption agencies are more likely to be accepted by adoption agencies in foreign countries. Finally, there appears to be a more clear-cut termination of the birth parents' rights with international adoption that appeals to many prospective parents.

Although political conflicts continue to produce orphans who need families, poverty and disease also cause parents or other relatives to allow their children to be adopted by residents of more developed countries like the United States. In some Asian countries, a strong preference for sons is an important motivation to adopt out baby girls. In China, where parents highly value sons and face fines for having more than one or two children, babies available for international adoptions are almost always girls. Many U.S. parents prefer to adopt girls, perhaps in a belief that girls will adapt more easily than boys to the new family and country. About 64 percent of international adoptions in 2001 were girls.

In 2002, three-fourths of all adopted foreign children were from China, Russia, South Korea, Guatemala, or Ukraine (see Figure B). But the list of countries is always changing. Adoptions from Russia, Ukraine, and Kazakhstan have skyrocketed in response to the extreme poverty in those countries following their transitions to market economies. Even though fertility is extremely low in these countries, many parents choose to give up their children. Adoptions from

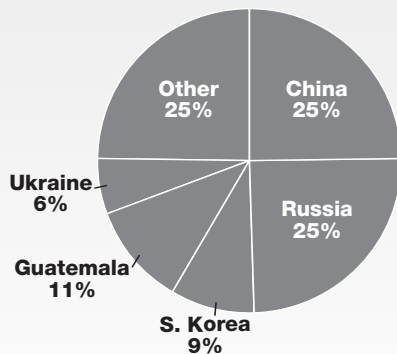
Romania soared in the 1990s, then halted abruptly in 2000 when the Romanian government issued a moratorium to weed out corruption from the country's adoption system.<sup>4</sup>

Parents in other industrialized countries also are turning abroad to adopt children. Although the United States adopts more children from abroad, Norway, Sweden, Denmark, Switzerland, Canada, and France adopt more children in relation to their annual births. In 1998, for example, Norwegians adopted one foreign child for every 100 live births, according to researcher Peter Selman, at the University of Newcastle Upon Tyne, United Kingdom.<sup>5</sup> U.S. parents adopted one foreign-born child for every 200 births in 2000.

With the current low fertility levels, increase in fertility problems, and dwindling supply of U.S.-born babies available for adoption, international adoptions are likely to continue as long as other countries are willing to place babies with American parents and Americans are willing to pay the fees and comply with the regulations.

*The United States adopts more children from abroad than any other country.*

*Figure B*  
**National Origin of Foreign-Born Children Adopted by U.S. Parents**



Note: Parts may not sum to 100 due to rounding.

Source: U.S. State Department, "Immigrant Visas Issued to Orphans Coming to the U.S." ([www.travel.state.gov/orphan\\_numbers.html](http://www.travel.state.gov/orphan_numbers.html), accessed Nov. 12, 2002).

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are in their working ages, so immigration adds most to the young adult population (see Box 7).

Immigration also affects the ethnic and racial makeup of a population. While Asians and Hispanics made up less than one-fifth of the U.S. population in 2000, for example, they accounted for an estimated three-

fourths of the U.S. immigrants who arrived between 1990 and 2000, according to the Census Bureau.

Social scientists have studied the effects of immigration on wages, tax revenues, government expenditures, and other social and economic features of American life and have come to varying and sometimes contradic-

*Box 7*

## The U.S. Foreign-Born Population

As a country settled by immigrants, the United States has always had a large foreign-born population, but the total reached an all-time high in 2000: 31 million, or about 11 percent of the total population. Although the number of foreign-born Americans is greater now, the foreign-born formed a larger share of the total in the early 1900s: nearly 15 percent. The share dropped after legal restrictions on immigration, the Great Depression, and world wars stymied the flow into the country and high U.S. fertility rates bolstered the U.S.-born population. In 1970, slightly less than 5 percent of the U.S. population was foreign-born, but the share more than doubled over the next 30 years.<sup>1</sup>

Some foreign-born residents are non-immigrants who are expected to return to their home countries, but the nonimmigrants may account for just 4 percent of all foreign residents. Recent estimates suggest that about one-fourth of the foreign-born are in the United States illegally. Many of these undocumented residents will also return home, but most are likely to settle in the United States.<sup>2</sup>

### How does the United States compare?

In 2000, foreigners made up an even greater share of the populations of Australia (25 percent) and Canada (19 percent), two other traditional immigration countries. Labor migration and waves of asylum seekers in the last quarter century also bolstered the foreign share in some European countries that have not traditionally welcomed immigrants. Foreigners account for between 9 percent and 10 percent of the populations of Austria, Belgium, and Germany, for example, similar to the U.S. figure. But

### Foreign-Born Who Arrived 1990–2000 and U.S.-Born, by Age, 2000

Percent of population

20	Age (55+)	7
42	25 to 54	54
10	18 to 24	19
28	Under 18	20
U.S.-born population		Foreign-born who arrived 1990–2000

Source: U.S. Census Bureau, "Profile of the Foreign-Born Population of the United States, 2000," PPL-145 (2001): tables 10-1A and 10-1B.

in most industrialized countries, foreigners made up less than 5 percent of residents in 2000. The United States has by far the largest foreign population in the more developed world.<sup>3</sup>

### How recently arrived?

Many foreigners living in the United States are fairly recent arrivals: More than 40 percent of the 2000 U.S. foreign-born population entered the country after 1990, and about 70 percent entered after 1980. Foreign-born Americans from Asia and Africa are especially recent arrivals: 82 percent of the foreign-born from Africa and 75 percent of those from Asia entered the United States after 1980.

Just over one-half of the total foreign-born population came from Latin

tory conclusions. Some see the current immigrants as adding to the public burden by using more public services than they pay for in taxes. Immigrants, for example, burden public schools with non-English-speaking children, hold down wages for U.S.-born residents, and add to the costs of public health and other serv-

ices. Others argue that the benefits of immigration outweigh the burdens: They point out that, for example, immigrants take jobs others do not want, pay taxes, and inject vitality and richness into American society.<sup>47</sup>

Immigration effects are difficult to measure. The burden may be more obvious at the local than national

America, more than one-quarter from Asia, about one-sixth from Europe or Canada, and most of the remainder from Africa.

### **Where do they live?**

Foreign-born Americans live throughout the United States, but two-thirds live in just six states—California, New York, Texas, Florida, Illinois, and New Jersey—and are highly concentrated in large metropolitan areas within these states. These same six states are home to about two-fifths of the total U.S. population. About one-half of all foreign-born residents live in greater New York City, Los Angeles, San Francisco, Miami, or Chicago.

### **How old are the foreign-born?**

Most people migrate to another country for economic opportunities, usually when they are young adults. Nearly 20 percent of foreign-born residents who arrived during the 1990s were ages 18 to 24 in 2000, about twice the percentage of U.S.-born residents ages 18 to 24 (see figure). Longer-term foreign-born residents are more middle-aged. In 2000, just 10 percent of all foreign-born were ages 18 to 24 and 10 percent were under age 18.

### **How do the foreign-born affect population growth?**

The prime working ages are also the optimum ages for having children. Many immigrants have children after they move to the United States, contributing further to U.S. population growth. Foreign-born women tend to have higher birth rates than do U.S.-born women. The percentage of births to foreign-born mothers is about 20

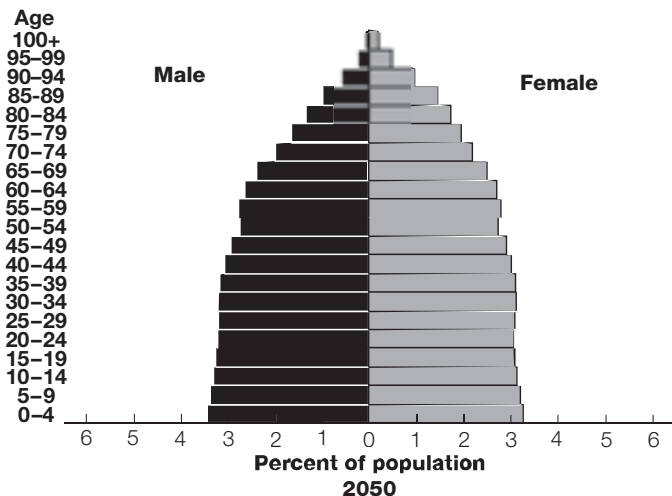
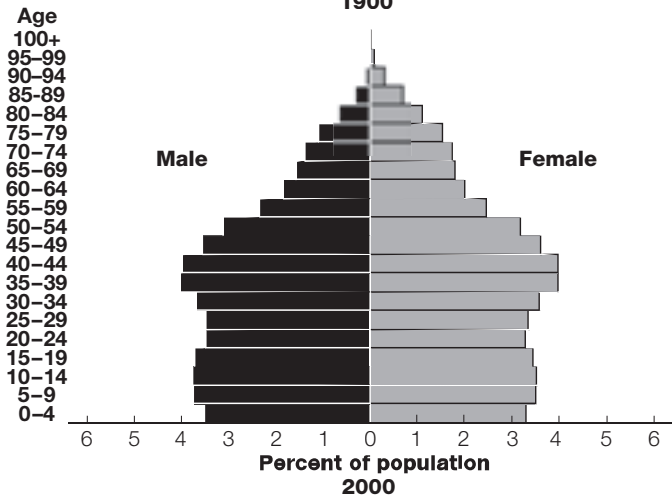
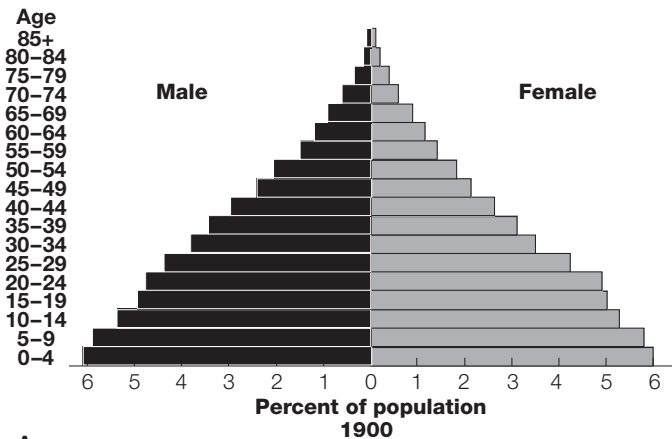
percent nationwide, but it is much higher in major immigration states. In 2000, children of foreign-born mothers made up about 43 percent of the school-age population in California and 28 percent of the school-age population in Florida.<sup>4</sup> In 2000, at least one-fifth of Americans were of foreign stock, which includes the foreign-born and their children.<sup>5</sup>

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Figure 7

**U.S. Population by Age and Sex, 1900, 2000, and 2050 (Projected)**



Sources: U.S. Census Bureau, *Historical Statistics of the United States: Colonial Times to 1970* (1975); and U.S. Census Bureau, International Data Base (Oct. 10, 2002, release; unpublished tables).

level, but the inconclusive results add to the controversy regarding whether the U.S. government should further restrict legal immigration and more aggressively seek and deport illegal foreign residents.<sup>48</sup>

Regardless of official policy, most demographers assume that the economic opportunities in the United States will continue to attract settlers from abroad. Government policies, along with other unknown economic and political factors, will moderate the future flow. The most recent projections assume that net migration will range between 800,000 and 1 million annually until 2050.<sup>49</sup>

Many other more developed countries will also attract large numbers of migrants in coming decades. Eurostat, the statistical agency of the European Commission, reports estimates of about 650,000 immigrants annually for the 15 EU countries until 2020. These immigrants will add to national populations and will stave off population decline for a while, but a UN study estimates that the EU would need to welcome more than 1 million migrants annually between 2025 and 2050—several times the current flow—to counteract natural decrease. Even more immigrants would be required to maintain the current size of the labor force.<sup>50</sup> Most European countries do not want to accept so many immigrants, and most demographers believe immigration will not reach such high levels in Europe by 2050.<sup>51</sup>

Japan would need to admit more than 340,000 immigrants annually between 2000 and 2050 to avoid population decline—many times its current level. The United States, in contrast, could avoid decline and maintain its working-age population by 2050 with its present level of immigration, according to the UN study.

The United States is likely to remain the world's leading destination for international migrants, although the size of the annual flow will vary—perhaps dramatically—depending on conditions in the United States and the sending countries.

## Changing Age Profile

U.S. fertility, mortality, and immigration trends have shaped the country's age and sex profile. Swings in fertility have the greatest long-term effects on age structure, which can have its own profound effects on a society. When fertility rates are high or rising, each generation (or birth cohort) is larger than the preceding one; when rates are very low or falling, succeeding birth cohorts are often smaller.

The relative size of a cohort is important because it determines the number of people who are competing for the same jobs, promotions, federal entitlements, and other limited resources. Economist Richard Easterlin theorized that people born into a cohort that is smaller than the preceding one would encounter less competition for jobs and earn higher incomes, which would encourage them to marry earlier and have more children.<sup>52</sup> This might explain why Americans born in the 1930s, when fertility was relatively low, produced the baby boom by marrying and starting families at younger ages than their parents or even their older siblings. People born into a cohort that is substantially larger than the preceding one would encounter more job competition and lower relative wages, causing them to delay marriage and childbearing. The relative cohort theory might explain the baby boomers' marked postponement of marriage and childbearing, which led to plummeting fertility rates in the mid-1970s.<sup>53</sup>

In 1900, when the United States still had high mortality and fertility, the country's age and sex structure formed a pyramid, with a large young population as its base and the small elderly population as its top (see Figure 7). About 45 percent of Americans were under age 20, and less than 5 percent were age 65 or older. Each birth cohort was slightly larger than the preceding one, perpetuating the broad base of young people who constituted a tremendous momentum for

Photo removed for copyright reasons.

*In 2000, there were about 62 dependents—children under age 18 and adults age 65 or older—for every 100 working-age adults. This ratio is expected to rise to about 80 by 2030, because of population aging.*

future growth. Some members of each birth cohort died before reaching the next age group, which accentuated the difference in cohort sizes, especially further up the age pyramid.

The pyramid shape was distorted in the ensuing decades by fluctuations in births, caused by the 1930s drop in the TFR, the baby boom and baby bust, and declining mortality, and also by the waxing and waning of immigration flows. In 2000, 26 percent of the population was under age 20 and 12 percent was age 65 or older. The U.S. age pyramid in 2000 shows a bulge in the population ages 35 to 54, roughly corresponding with the baby-boom cohort. The shorter bars just below that age group identify the baby-bust cohort of the late 1960s and 1970s. Stable fertility rates since the 1980s, combined with low infant and child mortality, have meant that several generations of similar size have been added to the U.S. population.

The U.S. age profile will experience another transformation over the next 50 years as the baby-boom generation ages. In 2011, the first baby boomers will turn 65, causing a sharp increase in the number of elderly Americans. By 2050, the population age 65 or older is projected to reach

21 percent of the total, or nearly 87 million people.

Assuming that fertility stays near current levels for the next few decades, the bulges and indentations in the age-sex pyramid caused by the baby boom and bust (and their echoes) will soften. Roughly equal numbers of Americans will be born each year, though their numbers will be supplemented by net migration. This will produce fairly even bars up to about age 45 in the population profile for 2050. In the older ages at the top of the pyramid, the remnants of the late 20th-century fertility swings and increasing life expectancy will still be visible.

Several aspects of age structure are important to future population growth and economic well-being. While fertility, mortality, and immigration mold the age-sex distribution, the population's size and age profile will determine the number of future births and deaths and, consequently, the size and age composition of future generations. The baby boomers produced the bulge known as the baby-boom echo (who were ages 5 to 19 in 2000) even though the baby boomers' fertility was fairly low. The roughly 4 million births per year in the 1990s do not reflect higher fertility among younger women; rather, the births reflect the large number of baby boomers who were having their own children.<sup>54</sup>

Another aspect of age structure important for a country's economic well-being is the size of the working-age population relative to the population in the older and younger dependent ages. Americans under age 18 and age 65 or older are categorized as dependent: Most Americans are in school and financially dependent on their parents at least until age 18, while those age 65 or older are considered to be of retirement age and not expected to support themselves through employment.

The dependency ratio, often used to gauge the economic burden borne by the current labor force, is defined as the ratio of people under age 18

and age 65 or older per 100 people ages 18 to 64. In the 20th century, the U.S. dependency ratio was highest during the second half of the baby boom, buoyed by the unprecedented numbers of births during the previous 10 to 15 years. Old-age dependency accounted for a relatively small share of the ratio (see Figure 8). Since then, lower fertility and the entry of the huge baby-boom cohort into middle working ages have reduced the dependency ratio to one of the lowest levels of the 20th century. In 2000, there were 62 Americans of dependent age per 100 people of working age, which meant that there were nearly five people of working age for every three people who were nominally "too old" or "too young" to work.

## Effects of the Changing Age Profile

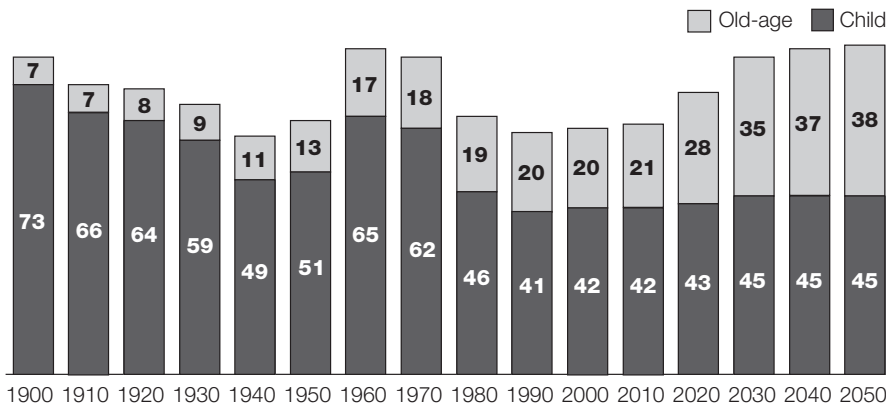
As baby boomers reach age 65, the dependency ratio will increase markedly. By 2030, the entire baby-boom population will be age 65 or older and the dependency ratio will be near 80, about the same as it was in 1900. The notable difference is that in 1900 children accounted for nine-tenths of the dependent population, while in 2040 they will probably account for slightly less than three-fifths. Because parents provide most of the financial support of children, while taxes on workers pay for programs to support the elderly, the old-age dependency ratio has a much greater effect on government spending and thus on the national economy.

## Child Dependency

These age thresholds are useful legal and public policy benchmarks, but they reflect the history, custom, and conditions prevailing at the time they were established and are not immutable. In the United States in the early 20th century and in many less developed countries today, the child dependency threshold would probably have been lower because children left school earlier to work

Figure 8

### U.S. Child and Old-Age Dependency Ratios, 1900–2000, Projections to 2050



Note: Ratios equal number of persons under age 18 and age 65 or older per 100 persons ages 18 to 64.

Sources: U.S. Census Bureau, *Historical Statistics of the United States: Colonial Times to 1970* (1975); and U.S. Census Bureau, International Data Base (Oct. 10, 2002, release; unpublished tables).

or get married. One of the major social achievements of the United States in the 20th century was universal education through high school. In 1910, just 59 percent of U.S. youth ages 5 to 19 attended school, but in the 1990s, schooling was nearly universal up to age 18.<sup>55</sup>

These social developments raised the dependency threshold to 18, but in practice, dependency does not end at a specific age. Many young adults combine schooling and employment, or “stop out” to travel or explore different lifestyles and careers. Sociologist Ronald Rindfuss describes the young-adult years as “demographically dense” because they encompass a variety of demographic events such as leaving school and the parental home, moving from one country or state to another, getting married and having children, and starting a full-time job.<sup>56</sup> These events may not occur in a particular order. The ages 18 to 24 have become a kind of semi-dependent period in which young adults may earn income but still receive substantial help from parents. Young adults live in their parents’ home longer today than in 1950s. They may return home after school or military service or between jobs.

Such parental support was not as socially acceptable for young adults 100 or even 50 years ago.<sup>57</sup>

#### Old-Age Dependency

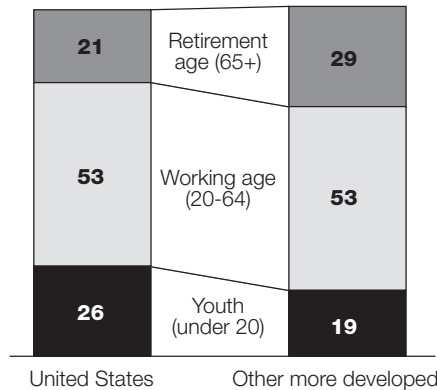
The age limits of dependency are also fluid for the older population. Age 65 is generally used to define the retirement-age population, in part because 65 was set as the threshold for Social Security benefits when the system was established in 1935. But the age limit was somewhat arbitrary. Former Census Bureau director Martha Farnsworth Riche explains that, when Social Security was created, some wanted to set the minimum benefits eligibility at age 70, but officials ultimately were swayed by arguments that a lower eligibility age would leave more jobs open for the many unemployed younger workers.

The concept of retirement was fairly new at the time; most people (especially men) were expected to work as long as their health allowed. In the early 1900s, most men age 65 or older were still in the labor force. Nearly three in four older men were gainfully employed in 1890, as were nearly three in five in 1930.<sup>58</sup> But the labor force participation of older American men dropped markedly in

Figure 9

**Population in the United States and Other More Developed Countries, by Age, 2050**

Percent of population



Note: Totals do not add to 100 due to rounding.

Source: U.S. Census Bureau, International Data Base (Oct. 10, 2002, release; [www.census.gov/ipc/www/idbagg.html](http://www.census.gov/ipc/www/idbagg.html), accessed Oct. 12, 2002).

the ensuing decades. The percentage of men in their early 60s (ages 62 to 64) in the labor force dropped from 76 percent in 1963 to 48 percent in 2001. Labor force participation dropped substantially even for men in their late 50s, from 90 percent in 1963 to 75 percent in 2001.<sup>59</sup> While a greater percentage of older women are in the labor force, they started from such low levels that their presence does little to bolster the overall participation of older Americans.

“Participation in paid work is still uncommon after age 65,” according to demographer Christine Himes.<sup>60</sup> She reports that older Americans who work are more likely to be self-employed; to have made large investments in their education or training; or to work in agriculture, where the concept of retirement may be less clear-cut. Some older workers in nonagricultural industries also ease out of the labor force by reducing their hours because of health or other considerations.

The average retirement age for American men dropped from nearly 67 in the early 1950s to 63 in the late 1970s, according to estimates by demo-

grapher Murray Gendell.<sup>61</sup> In the 1950s and 1960s, earlier retirements were encouraged by corporations as a way to reduce salary commitments to older, more highly paid workers, but early retirement was possible for many only because they had sufficient retirement savings and pension income.

In the 1980s, several developments also countered trends toward earlier retirement.<sup>62</sup> One was the elimination of mandatory retirement ages. A more recent change was the removal of the tax penalty for older people who earned income after they had signed up for Social Security benefits. Another change is designed to ease the retirement burden of the baby boomers by gradually raising the minimum age for receiving Social Security benefits. Americans born after 1959 will need to wait until age 67 to be eligible for full benefits.<sup>63</sup>

Two other trends that make it easier for people to work well into their 60s are the shift away from jobs that require physical strength or endurance and the improvement in the health of the elderly. People are healthier for longer, which suggests that they are physically and mentally able to work more years than Americans could 50 or 70 years ago. Research from Duke University suggests that healthy life expectancy is growing as fast as overall life expectancy.<sup>64</sup> The average number of years Americans live after age 65 has increased from about 12 years in 1900 to 18 years in 2000—16 years for men, 19 years for women—and is projected to increase in the 21st century.

**Increasing Dependency**

With young adults taking longer to assume financial independence and older adults retiring at earlier ages, the dependency ratio as currently defined may understate the public and individual financial burden of supporting the older and younger population. Riche points out that “the economics and politics of the times will determine whether the public will wish to re-assess these age thresholds.”<sup>65</sup> Current trends suggest that actual dependency for young people now extends well

beyond age 18, while dependency for many older people can come earlier or later than age 65.

These expected increases in old-age dependency, especially the impending retirement of the baby-boom generation, have been the topic of intense discussion among economists and other social scientists. Gendell notes that, given current retirement trends, the baby boomers will start to swell the retirement population beginning in 2008 when the first of the generation turns age 62.<sup>66</sup>

The biggest concern about the aging of the baby-boom generation is the potential strain on the Social Security, Medicare, and Medicaid systems. Social Security and Medicare are entitlement programs, which guarantee that anyone who meets the eligibility criteria is entitled to the promised payment. While baby boomers are working, they are paying in more than is being used by the current older population. But when they retire, they will receive more in benefits than they contribute in taxes.<sup>67</sup> U.S. Federal Reserve chairman Alan Greenspan warns that the aging of the U.S. population presents the country with “a daunting long-term fiscal challenge,” and adds, “the extent of the challenge is not adequately reflected in conventional measures of the federal budget.”<sup>68</sup>

### **Challenges for Youth**

The baby-boom echo is producing its own challenges for the younger generation. For example, when the class of 2000 graduated from high school, there were about 52 million students enrolled in elementary and secondary schools, the largest number in U.S. history.<sup>69</sup> This record crop of students will face stiff competition as they enter adulthood. More U.S. students are finishing high school and attending college. In 1967, nearly one-fifth of Americans ages 18 to 24 were high school dropouts; in 2000, just one-eighth dropped out. Two-thirds of high school graduates ages 14 to 24 had completed some college, compared with one-half in 1967. The

Photo removed for copyright reasons.

*The percentage of older women in the labor force is increasing from the extremely low levels of past decades, but a large majority of women over age 65 do not work.*

record number of students means there will be intense competition for a limited number of college slots, particularly at more-affordable public schools that attract large numbers of applicants.<sup>70</sup>

After college, the situation could get worse. Echo boomers will be competing for jobs with members of their own generation as well as the baby-boom generation, who still dominate the U.S. workforce. While the entry of the baby-bust generation coincided with high demand for young, educated workers in the high-tech boom years of the 1990s, young adults entering the labor force in the next decade may find it harder to get well-paying jobs.

### **Other More Developed Countries Aging Faster**

Although the demographic future is dominated by aging and an increase in the dependency ratio, the United States appears young and “unburdened” relative to other more developed countries. In Japan and many European countries, more than 15 percent of residents are already over age 65, and the gap between the United States and other more developed countries will widen over the next few decades because of differences in age structure, fertility, mortality, and net migration. By 2050, nearly 30 percent of residents of other more



Table 5

### State Contributions to U.S. Population Growth, 2000–2001

States	Percent of U.S. population growth		
	Total U.S. growth	Growth from	
		International migration	Natural increase
California	21.4	10.2	11.2
Texas	11.8	4.0	7.8
New York	8.5	4.8	3.7
Illinois	5.1	2.2	2.9
Florida	5.0	3.5	1.5
Georgia	3.5	0.9	2.6
New Jersey	3.2	1.8	1.4
Michigan	2.5	0.7	1.8
Arizona	2.5	0.9	1.6
Virginia	2.4	0.8	1.6
North Carolina	2.4	0.6	1.8
Washington	2.2	0.8	1.3
Ohio	2.1	0.4	1.8
Maryland	2.0	0.8	1.2
Colorado	2.0	0.6	1.4

Note: The total column refers to total U.S. population growth from natural increase (births minus deaths) and net international migration (immigrants minus emigrants). The figures do not reflect interstate migration or the net movement of federal employees and dependents overseas.

Source: U.S. Census Bureau, Population Estimates: States (Dec. 27, 2001, release; <http://eire.census.gov/popest/data/states/populartables/table02.php>, accessed Nov. 1, 2002).

developed countries will be age 65 or older, compared with 21 percent of Americans (see Figure 9, page 30). The governments of Japan and European countries are extremely concerned about the impending financial burden and labor market stresses posed by rapid aging.<sup>71</sup> The United States' greater percentage of young people entering childbearing ages means the country has a greater potential for future population growth.

The differences in the median age in 2050 are also remarkable: The median age for the United States was 35 years in 2000. The median age is projected to rise to about 39 by 2050, compared with 48 in Europe, 45 in Canada, and 52 in Japan.

In Europe, the effect of population aging on the dependency ratios is accentuated by a greater decline in the retirement ages. Older Europeans are even less likely to be in the labor force than older Americans. In 1995, just 35 percent of German, 30 percent of Italian, and 19 percent of

Dutch men ages 60 to 64 were working, for example, compared with 53 percent of their American counterparts. Early retirements are facilitated by current pension laws: Many European countries allow workers to receive pension benefits beginning at age 60 (age 55 in Italy), compared with the U.S. minimum age of 62, and allow full benefits at age 65 (age 60 in Italy). The situation is very different in Japan, however. While Japanese can retire with a pension at age 60, 76 percent of men ages 60 to 64 were still in the labor force in 1995.<sup>72</sup>

## Centers of Growth

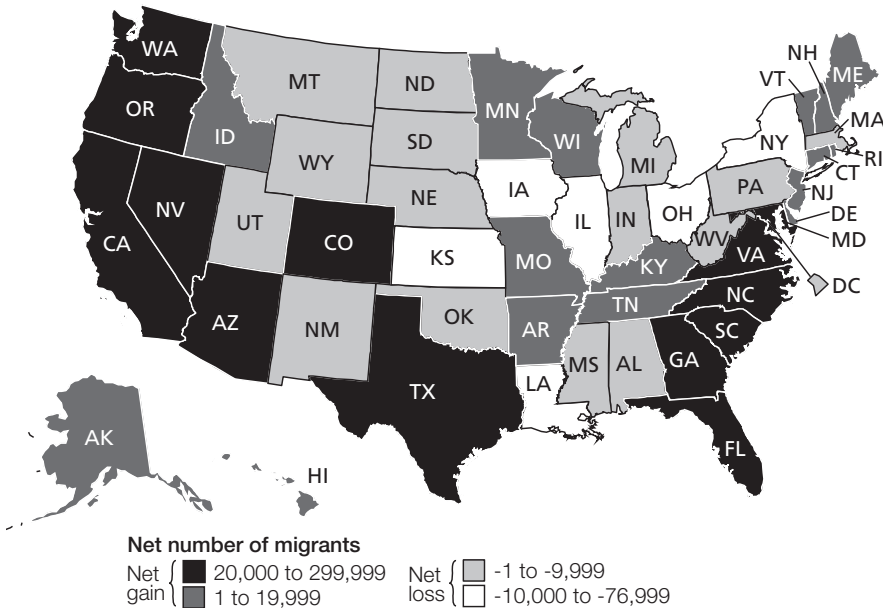
The 2.7 million people added to the U.S. total between July 2000 and July 2001 were highly concentrated in a few states. More than one-half were added to just five states and an additional one-fourth were added to 10 other states (see Table 5). Net international migration and natural increase in California alone contributed one-fifth of U.S. population growth that year.

States also gain or lose residents from interstate migration—which may be driven by different economic and social factors than those affecting international migration and natural increase. Texas and Florida, for example, had substantial population increases from interstate migration between 2000 and 2001, cementing their positions among the most populous U.S. states. California, New York, and Illinois had a net outmigration of residents to other states, although natural increase and international migrants more than compensated for the loss.

Migration was the primary factor driving population increases or decreases in many states (see Figure 10). Net domestic and international migration accounted for at least 80 percent of the growth in Florida and Nevada, for example, largely because those states attracted thousands of new residents from other states. An estimated 300,000 more people moved into than out of Florida between 2000 and 2001,

Figure 10

## Net International and Interstate Migration by State, 2000–2001



Source: U.S. Census Bureau, “Time Series of Estimated State Demographic Components of Change: July 1, 2000, to July 1, 2001” (<http://eire.census.gov/popest/data/states/tables/ST-EST2001-03.php>, accessed Nov. 10, 2002).

while about 40,000 more people were born than died in the state. Foreign and domestic migrants tend to be working-age couples and their children, but Florida also attracts a disproportionate number of elderly migrants attracted by the state’s amenities for retirees. Nevada, home to just over 2 million people in 2001, attracts a broad range of migrants and has been the fastest-growing state since the 1960s.

In the 21 states with net population losses from domestic and international migration between 2000 and 2001, natural increase prevented population totals from declining in all but four: Louisiana, Iowa, North Dakota, and West Virginia. West Virginia, which has the country’s oldest median age, was the only state to have more deaths than births (see Figure 11, page 34). This natural decrease, combined with net outmigration of about 4,000 to states with more jobs and opportunities, meant that West Virginia experienced a net loss of more than 5,000 residents in one year.

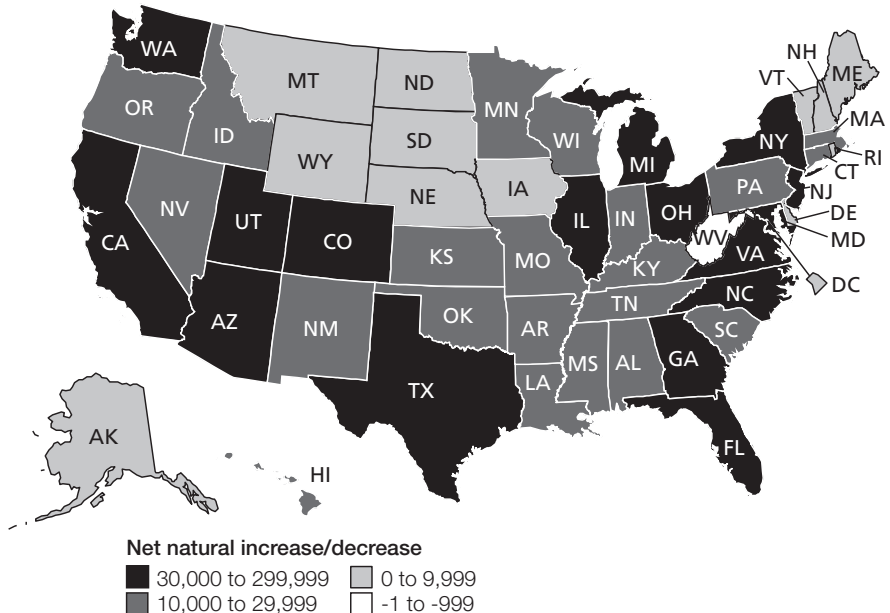
States with relatively young populations tend to have higher rates of natural increase because there are relatively fewer people in the older ages where most deaths occur and relatively more people in the childbearing ages. Utah has the country’s youngest population. Just 8.5 percent of the state’s population was age 65 or older in 2000, and nearly one-half (46 percent) was under age 25 (see Appendix Table, page 36). Cultural and religious traditions in Utah have favored large families and early childbearing, and the state consistently has had the nation’s highest birth rate.<sup>73</sup> Although Utah has lost some population through interstate migration, the state’s young population profile appears to ensure continued natural increase.

### South and West Grow Fastest

Southern and Western state populations grew much faster than did Midwestern and Northeastern states in the

Figure 11

## Natural Increase or Decrease for States, 2000–2001



Source: U.S. Census Bureau, "Time Series of Estimated State Demographic Components of Change: July 1, 2000, to July 1, 2001" (<http://eire.census.gov/popest/data/states/tables/ST-EST2001-03.php>, accessed Nov. 10, 2002).

1990s, continuing patterns evident for the past 40 years.<sup>74</sup> The largest population concentrations are shifting from older metropolitan areas in the Midwest and Northeast to newer metro centers in the West and South. In 1950, the Northeast—with megacities New York, Boston, and Philadelphia—accounted for 26 percent of the country's population; the Midwest—anchored by behemoths Chicago and Detroit—held 29 percent. Western states, which included just 13 percent of the national population in 1950, passed the Northeast in population during the 1980s and are poised to pass the Midwest before 2010.

While California's 34 million residents still dominate the West demographically, growth has soared in many metropolitan areas outside California, including Denver; Las Vegas; Portland, Ore.; Phoenix; and Seattle. Montana and Wyoming have not been part of this growth so far, gaining fewer than 1,500 residents between 2000 and 2001.

The most impressive growth in recent decades has been in the South, which included 36 percent of the U.S. population in 2000, up from 31 percent in 1950. Smaller metro areas near Austin, Tex.; Fayetteville, Ark.; McAllen, Tex.; and Naples, Fla., were among the fastest growing in the country between 1990 and 2000. Many large Southern metro areas—including Atlanta, Dallas, Houston, Miami, and Tampa, Fla.—also had impressive growth.

Population growth in the Southern and Western metro areas far outstripped that in the major metropolitan areas in the Northeast and Midwest, which experienced slow growth or even population losses, although they remain among the nation's largest urban areas (see Table 6).

### Future Growth

At the national level, the U.S. population's age structure almost ensures a certain level of growth—but these

factors are much more difficult to predict for smaller geographic units. An older age structure suggests slow growth, for example, yet Florida has among the oldest age profiles and fastest population growth rates in the country, thanks to international and domestic migration. Alaska has one of the nation's youngest populations: Just 5.7 percent of the population was age 65 or older, and 30.4 percent was under age 18 in 2000. Yet Alaska's growth has lagged behind the rest of the nation's, and the Census Bureau does not foresee faster growth for Alaska during the next few decades.

## Conclusion

What do current trends suggest about the U.S. population in coming decades? The future is partially visible in the outlines of its current age and sex profile. But there will undoubtedly be surprises that will disrupt current demographic trends and could push the 2050 population up or down from the current projection. Fertility may increase, decline, or fluctuate wildly in response to changing social and economic conditions. Net international migration may turn negative or surge to new heights because of political actions or economic conditions. Mortality may decrease because of medical breakthroughs or increase because of new viruses or lifestyle dangers.

Populations will also shift within the United States in response to economic and political developments and cultural preferences that we cannot foresee. Geographic barriers and dwindling fresh water supplies may end the expansion of some Western and Southern cities, because of environmental limits or regional zoning laws. Population shifts will also be affected by how many baby boomers move to such retirement meccas as Florida, North Carolina, and Arizona as they exit the work force.

Table 6

### 25 Largest U.S. Metropolitan Areas in 2000 and Percent Change, 1990–2000

Rank by percent change	Metropolitan area, state	2000 populations (millions)	Percent change, 1990–2000
1	Phoenix–Mesa, AZ	3.3	45
2	Atlanta, GA	4.1	39
3	Denver–Boulder–Greeley, CO	2.6	30
4	Dallas–Fort Worth, TX	5.2	29
5	Portland–Salem, OR–WA	2.3	26
6	Houston–Galveston–Brazoria, TX	4.7	25
7	Miami–Fort Lauderdale, FL	3.9	21
8	Sacramento–Yolo, CA	1.8	21
9	Seattle–Tacoma–Bremerton, WA	3.6	20
10	Minneapolis–St. Paul, MN–WI	3.0	17
11	Tampa–St. Petersburg–Clearwater, FL	2.4	16
12	Washington–Baltimore, DC–MD–VA–WV	7.6	13
13	Los Angeles–Riverside–Orange County, CA	16.4	13
14	San Diego, CA	2.8	13
15	San Francisco–Oakland–San Jose, CA	7.0	13
16	Kansas City, MO–KS	1.8	12
17	Chicago–Gary–Kenosha, IL–IN–WI	9.2	11
18	Cincinnati–Hamilton, OH–KY–IN	2.0	9
19	New York–Northern New Jersey–Long Island, NY–NJ–CT–PA	21.2	8
20	Boston–Worcester–Lawrence, MA–NH–ME–CT	5.8	7
21	Detroit–Ann Arbor–Flint, MI	5.5	5
22	Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	6.2	5
23	St. Louis, MO–IL	2.6	4
24	Cleveland–Akron, OH	2.9	3
25	Pittsburgh, PA	2.4	-2

Note: States ranked by unrounded percentages.

Source: U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary File and 1990 Census (April 2, 2001, release; www.census.gov, accessed Nov. 18, 2002).

Other more developed countries are subject to similar uncertainties, but their older age structures and extremely low fertility rates have set the stage for population decline that will be difficult to check. The United States will continue to grow and to diversify racially and ethnically in coming decades. The consequences of the growth and change will be far-reaching. Policymakers need to learn more about these consequences and strive to accentuate the positive aspects of a growing population while guarding against the negative effects of population growth and change.

*Appendix Table*

**States Ranked by Population Under Age 18, 2000**

State	Percent of total population		Median age (years)
	Under age 18	65 years or older	
<b>United States</b>	<b>25.7</b>	<b>12.4</b>	<b>35.3</b>
Utah	32.2	8.5	27.1
Alaska	30.4	5.7	32.4
Idaho	28.5	11.3	33.2
Texas	28.2	9.9	32.3
New Mexico	28.0	11.7	34.6
California	27.3	10.6	33.3
Louisiana	27.3	11.6	34.0
Mississippi	27.3	12.1	33.8
South Dakota	26.8	14.3	35.6
Arizona	26.6	13.0	34.2
Georgia	26.5	9.6	33.4
Kansas	26.5	13.3	35.2
Nebraska	26.3	13.6	35.3
Illinois	26.1	12.1	34.7
Minnesota	26.2	12.1	35.4
Michigan	26.1	12.3	35.5
Wyoming	26.1	11.7	36.2
Indiana	25.9	12.4	35.2
Oklahoma	25.9	13.2	35.5
Washington	25.7	11.2	35.3
Colorado	25.6	9.7	34.3
Maryland	25.6	11.3	36.0
Nevada	25.6	11.0	35.0
Missouri	25.5	13.5	36.1
Montana	25.5	13.4	37.5
Wisconsin	25.5	13.1	36.0
Arkansas	25.4	14.0	36.0
Ohio	25.4	13.3	36.2
Alabama	25.3	13.0	35.8
South Carolina	25.2	12.1	35.4
Iowa	25.1	14.9	36.6
New Hampshire	25.0	12.0	37.1
North Dakota	25.0	14.7	36.2
Delaware	24.8	13.0	36.0
New Jersey	24.8	13.2	36.7
Connecticut	24.7	13.8	37.4
New York	24.7	12.9	35.9
Oregon	24.7	12.8	36.3
Kentucky	24.6	12.5	35.9
Tennessee	24.6	12.4	35.9
Virginia	24.6	11.2	35.7
Hawaii	24.4	13.3	36.2
North Carolina	24.4	12.0	35.3
Vermont	24.2	12.7	37.7
Pennsylvania	23.8	15.6	38.0
Maine	23.6	14.4	38.6
Massachusetts	23.6	13.5	36.5
Rhode Island	23.6	14.5	36.7
Florida	22.8	17.6	38.7
West Virginia	22.3	15.3	38.9

Source: U.S. Census Bureau, "GCT-P5. Age and Sex: 2000," Census 2000 Summary File 1 (<http://factfinder.census.gov>, accessed Nov. 4, 2002).

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### **Selected websites with information on population growth in the United States and other more developed countries**

- Eurostat, Statistical Office of the European Commission  
<http://europa.eu.int/comm/eurostat/>
- National Center for Health Statistics  
[www.cdc.gov/nchs](http://www.cdc.gov/nchs)
- Population Reference Bureau and Social Science Data Analysis Network  
[www.ameristat.org](http://www.ameristat.org)
- Population Reference Bureau  
[www.prb.org](http://www.prb.org)
- Statistics Canada  
[www.statcan.ca](http://www.statcan.ca)
- U.S. Census Bureau  
[www.census.gov](http://www.census.gov) and <http://factfinder.census.gov>

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