CHAPTER 1
Introduction to Demography

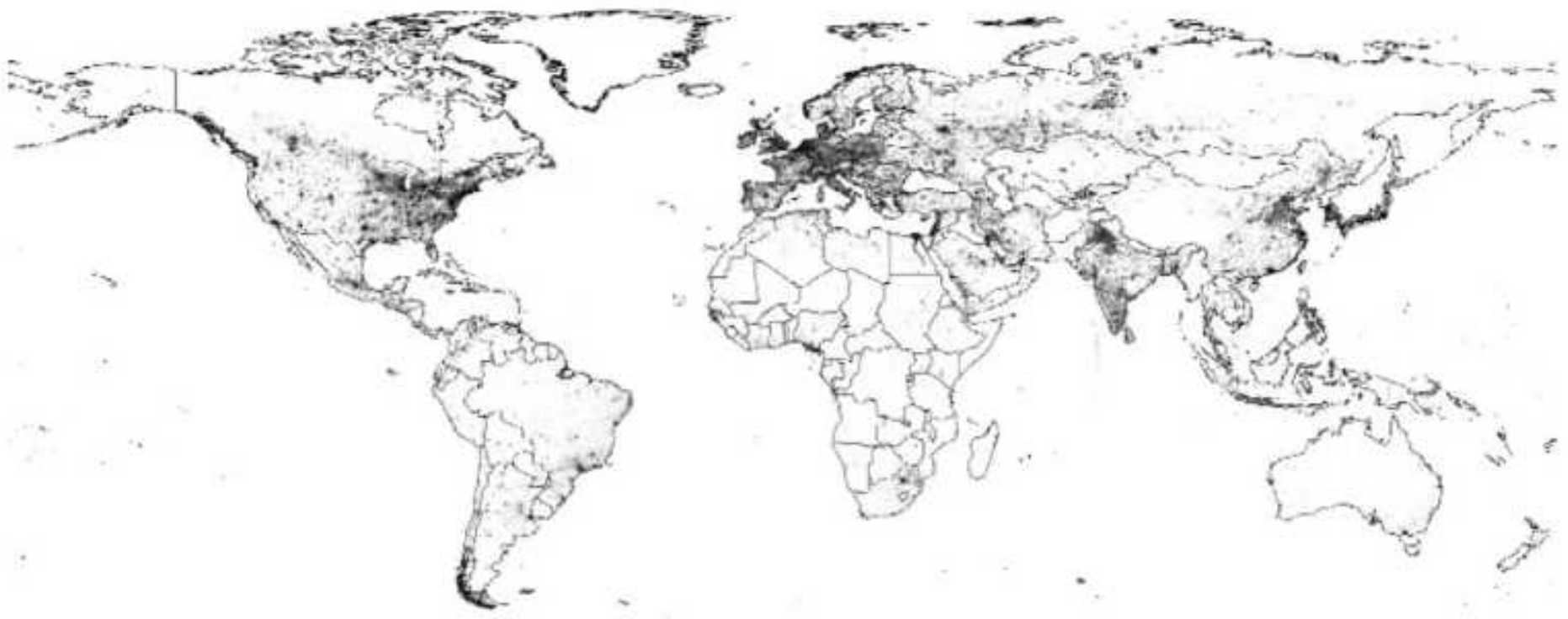


Figure 1.1 The World's Population Distribution Defined by Nighttime Lights
The nighttime light data are reversed on this map, so that the darker areas show where there are the most lights at night, suggestive of population density.

Source: Image and data processing by NOAA's National Geophysical Data Center, DMPS data collected by the US Air Force Weather Agency: http://www.gdc.noaa.gov/dmsp/.

Population growth is an irresistible force. Indeed, every social, political, and economic problem facing the world today has demographic change as a root cause. What is more, I guarantee that it is a force that will increasingly affect you, personally, in ways both large and small throughout your life. Population change is not just something that happens to other people—it is taking place all around you, and you are making your own contribution to it.

The rise in life expectancy over the past two centuries, and most dramatically since the end of World War II, is the most important phenomenon in human history. More people living longer has produced unprecedented population growth and previously unthinkable transformations in human society. What is perhaps even more interesting to you, personally, is that this past is definitely prologue to your own future, as the world's population will continue to increase for the rest of your life. Though most of this growth will take place in developing countries (more specifically, in the *cities* of those countries), we will all experience the consequences: our own, as yet unthinkable, transformations.

Reports of declining birth rates in many parts of the world notwithstanding, it is a fact that the number of people added to the world each day is higher today than at any time in history. Moreover, we now live in a world crowded not only with people but also with contradictions. There are more highly educated people than ever before, yet also more illiterates; more rich people, but also more poor; more well-fed children, but also more hunger-ravaged babies whose images haunt us. We have better control over the environment than ever before, but we are damaging our living space in ways we are loath to imagine.

Our partial mastery of the environment is, indeed, key to understanding why the population is growing, because we have learned how to conquer more and more of the diseases that once routinely killed us. Although the rapid, dramatic drop in mortality all over the world is certainly one of humanity's greatest triumphs, we are finding that no good deed goes unpunished, even such an altruistic one as conquering (or at least delaying) death. Because the birth rate almost never goes down in tandem with the decline in the death rate, the result is rapid population growth. This relentless increase in numbers continues to fuel both environmental damage and social upheaval.

Demographic change isn't all bad news, of course, but population growth does make implacable demands on natural and societal resources. A baby born this year won't create much of an immediate stir outside her immediate family, but in a few years she will be eating more and needing clothes, an education, then a job and a place of her own. And, then, most likely, she will have babies of her own, and the cycle continues.

Understanding these and a wide range of related issues is the business of demography. Whether your concern with demography is personal or global or a combination, unraveling the "whys" of population growth and change will provide you with a better perspective on the world and how it works.

Demography is defined as the scientific study of human populations. But, really, demography is destiny. This book is an odyssey to understand the component parts of this powerful force and how they operate.

What Is Demography?

The term itself comes from the Greek root *demos*, which means people, and was coined in 1855 by Achille Guillard, who used it in the title of his book *Elements de Statistique Humaine ou Démographie Comparée*. Guillard defined demography as "the mathematical knowledge of populations, their general movements, and their physical, civil, intellectual and moral state" (Guillard 1855:xxvi). This is generally in tune with how we use the term today, in that modern demography is the study of the determinants and consequences of population change and is concerned with effectively everything that influences and can be influenced by:

- **population size** (how many people there are in a given place)
- **population growth or decline** (how the number of people in that place is changing over time)
- **population processes** (the levels and trends in fertility, mortality, and migration that are determining population size and change and that can be thought of as capturing life's three main moments: hatching, matching, and dispatching)
- **population spatial distribution** (where people are located and why)
- **population structure** (how many males and females there are of each age)
- **population characteristics** (what people are like in a given place, in terms of variables such as education, income, occupation, family and household relationships, immigrant and refugee status, and the many other characteristics that add up to who we are as individuals or groups).

It has been said that "the past is a foreign country; they do things differently there" (Hartley 1967:3). Population change and all that goes with it is an integral part of creating a present that seems foreign by comparison to the past, and it will create a future that will make today seem strange to those who look back on it several decades from now. Table 1.1 illustrates this idea, comparing population data for the United States in the year 1910 with that of the year 2010. To begin with, the top line of the table reminds us that in 1910 there were fewer than 2 billion people on the planet, whereas by 2010 there were nearly 7 billion (we hit that number in 2011). Although the U.S. population grew considerably during that century, from 92 million to 309 million, it did not keep pace with overall world population growth and so accounted for a slightly smaller fraction of the world's population in 2010 than it had in 1910 (more on this in the next chapter). Mortality levels in the U.S. dropped substantially over the century, leading to a truly amazing 29-year rise in life expectancy for females, from 52 in 1910 to 81 in 2010, with men lagging behind just a bit (the reasons for this are laid out in Chapter 5). Keep in mind that the life expectancy of 52 in 1910 was itself a big improvement over the 40 years people could expect to live in the middle of the nineteenth century.

Fertility also declined over the century between 1910 and 2010, although by world standards fertility in the United States in 1910 was already fairly low

Table 1.1 The Past Is a Foreign Country

	1910	2010
World population (billions)	1.8	6.9
U.S. population (millions)	92	309
U.S. percent of world total	5.1%	4.5%
Life expectancy (females)	52	81
Children per woman	3.5	1.9
Persons per household	4.4	2.6
% of U.S. population in California	3%	12%
Population of Buffalo, NY, compared to Los Angeles	Buffalo was more populous	LA was 15 times more populous
Immigrants from Italy (1900–1910); (2000–2010)	1.2 million	28,000
Immigrants from Mexico (1900–1910); (2000–2010)	123,000	1.7 million (legal immigrants)
% foreign-born	14.7%	12.9%
% urban	46%	81%
% of population under 15	32.1%	19.8%
% of population 65+	4.3%	13.0%
Passenger cars	450,000	190 million
% high school graduates among those 25 and older	~10%	87%

Source: Data for 1910 are from U.S. Census Bureau (1999); data for 2010 are from U.S. Census Bureau (2012) .U.S. Census Bureau: http://www.census.gov

(3.5 children per woman), having dropped from an estimated 7 children per woman at the beginning of the nineteenth century. Still, the drop from 3.5 to 1.9 clearly makes a huge difference in the composition of families, with average household size going down from 4.4 to 2.6 persons, and I discuss this more in Chapters 6 and 10.

Americans rearranged themselves spatially within the country over that span of time, and the considerable westward movement is exemplified by the increase in the fraction of the population living in California. It went from only 3 percent in 1910 to 12 percent in 2010. Consider that in 1910 Los Angeles had fewer people than Buffalo, New York; whereas by 2010 the Los Angeles metropolitan area was home to 15 times the number of people in Buffalo. In the latter part of the twentieth century, much of that growth in Los Angeles was fueled by immigrants from Mexico and Central America, but over the course of the century the composition of international immigrants had shifted substantially. In the decade preceding the 1910 census, there were about 123,000 Mexican immigrants to the United States, compared to 1.2 million Italian immigrants in the same time period. By contrast, in the decade leading up to the census in 2010, the numbers were essentially reversed, with 28,000 Italian immigrants and 1.7 million Mexican legal immigrants, in addition to a large number of undocumented immigrants. Yet, strange as it might seem in the current

era, when there is so much talk about immigrants, the data in Table 1.1 show that the foreign-born population actually represented a greater fraction of the nation in 1910 than it did a century later. We'll explore the reasons for that in Chapter 7.

The past was young, with 32 percent under the age of 15 and only 4 percent aged 65 and older; whereas the present is older, with only 20 percent under 15 and 13 percent aged 65 and older (more on this in Chapter 8). The past was predominantly rural, and the present is predominantly urban (as I discuss in Chapter 9); the past was predominantly pedestrian (there were only 450,000 passenger cars in 1910), and the present is heavily dependent on the automobile (with more than 190 million passenger cars being driven around the country). In the past, people were considerably less well educated than today, with only about 10 percent of those in 1910 achieving a high school education, compared to 87 percent now. These trends are discussed more in Chapter 10.

The world of 1910 was very different from the world of 2010, and the demographics represent an important part of that difference. The future will be different, in its turn, partly because of demographic changes taking place even as you read this page. The study of demography is thus an integral part of understanding human society.

How Does Demography Connect the Dots?

It may sound presumptuous, even preposterous, to suggest that nearly everything is connected to demography, but it really is true. The demographic foundation of our lives is deep and broad. As you will see in this book, demography affects nearly every facet of your life in some way or another. Population change is one of the prime forces behind social and technological change all over the world. As population size and composition changes in an area—whether it be growth or decline—people have to adjust, and from those adjustments radiate innumerable alterations to the way society operates.

This is very different, however, from saying that demography determines everything. Demography is a force in the world that influences every improvement in human well-being that the world has witnessed over the past few hundred years. Children survive as never before, adults are healthier than ever before, women can limit their exposure to the health risks involved with pregnancy and still be nearly guaranteed that the one or two or three babies they have will thrive to adulthood. Having fewer pregnancies and babies in a world where most adults reach old age means that men and women have more "scope" in life: more time to develop their personal capacities and more time and incentive to build a future for themselves, their children, and everyone else. Longer lives and the societal need for less childbearing by women mean that the composition of families and households becomes more diverse. The changes taking place all over the world in family structure are not the result of a breakdown of social norms so much as they are the natural consequence of societies adapting to the demographic changes of people living longer with fewer children in a world where urban living and migration are vastly more common than ever before. These are all facets of demography affecting your life in important ways.

There is no guarantee, however, about how a society will react to demographic change. That is why it is impossible to be a demographic determinist. Demographic change does demand a societal response, but different societies will respond differently, sometimes for the better, sometimes not. Nonetheless, it turns out that population structures are sufficiently predictable that we can at least suggest the kinds of responses from which societies are going to have to choose. The population of the world is increasing by more than 200,000 people per day, as I will discuss in more detail in the next chapter, but this growth is much more intense in some areas of the world than in others. In those places where societies have been unable to cope adequately, especially with increasing numbers of younger people, the fairly predictable result has been social, economic, and political instability. At the other end of the spectrum, there is considerable angst in some of the richer countries in which very low fertility has pushed the population to the edge of a decline, if not already into decline.

Population change is obviously not the only source of trouble in the world, but its impact is often incendiary, igniting other dilemmas that face human society. Without knowledge of population dynamics, for example, we cannot fully understand why the world is globalizing at such a rapid pace, nor can we understand the roots of conflict from the Middle East to Southeast Asia; nor why there is a simultaneous acceptance of and a backlash against immigrants in the United States and Europe. And we cannot begin to imagine our future without taking into account the fact that the population of the world at the middle of this century is expected to include 2 to 3 billion more people than it does now, since the health of the planet depends upon being able to sustain a much larger number of people than are currently alive. Because so much that happens in your life will be influenced by the consequences of population change, it behooves you to understand the causes and mechanisms of those changes. Let's look at some examples.

The Relationship of Population to Resources

Food None of the basic resources required to expand food output—land, water, energy, fertilizer—can be considered abundant today. This especially impacts less developed countries with rapidly rising food demands and small energy reserves. Even now in sub-Saharan Africa, food production is not keeping pace with population growth, and this raises the fear that the world may have surpassed its ability to sustain even current levels of food production, much less meet the demands of the nearly 3 billion additional people who will be in line for a seat at the dinner table over the next few decades. And the problem is not just on land. The annual catch of wild fish leveled off in the 1990s and has been declining since then, with an increasing fraction of fish coming from farms harvesting the few species amenable to aquaculture.

Water An estimated one in three humans already face water scarcity, as demand for water increases faster than the available supply of fresh water. In theory, we can convert salt water (which is most of the water on the planet) into fresh water, but the process requires a lot of energy.

Energy Every person added to the world's population requires energy to prepare food, provide clothing and shelter, and to fuel economic life in general. Our rising standard of living is directly tied to our increasing use of energy, yet every increment in demand is another claim on those resources. We know that petroleum reserves are limited. Can we transition quickly enough to solar and/or wind energy to meet the needs of a growing population? No one knows. Will biofuels be the answer? Not likely, because they come from valuable crop land that we need for growing food.

Housing and Infrastructure All of the future population growth in the world is expected to show up in the cities, especially those in developing countries. The irony of growing more food is that it requires mechanization, rather than more laborers, so as the number of babies born in rural areas continues to exceed deaths, the "excess" population is forced to move to cities in hopes of finding a job there. This means building homes (which requires lumber, cement, and a lot of other resources) and providing urban infrastructure (water, sewerage, electricity, roads, telecommunications, etc.) for those 2 to 3 billion newcomers. This increasing "demographic overhead" is burdensome, particularly for those countries that already cannot adequately provide for their urban populations.

Environmental Degradation As the human population has increased, so has its potential for disrupting the earth's biosphere. The very same explosion in scientific knowledge that has allowed us to push death back to ever older ages, thus unleashing population growth, has also taught us how to convert the earth's natural resources into those things that comprise our higher standard of living. And it is not just that we are using up resources; waste accompanies use. The waste from fossil fuel use is carbon dioxide released into the atmosphere, generating the well-known effect on global climate change, evidenced perhaps most dramatically by the melting glaciers. But we are also damaging the hydrosphere (the world of water) by contaminating the fresh water supply, destroying coral reefs and fishing out the ocean, while also wreaking havoc on the lithosphere (the thin layer of the earth's crust upon which we live) by degrading the land with toxic waste and permitting top soil loss, desertification, and deforestation.

The task we will confront in the future is to maintain our standard of living while using many fewer resources per person. Keep in mind that international agencies such as the United Nations and the World Bank have suggested, through the Millennium Development Goals, that long-term sustainability of the planet requires that we lift all people out of poverty so that everyone can be a better steward of the planet. This is not going to be a simple project.

The Relationship of Population to Social and Political Dynamics

Regional Conflict Books and movies have been created to exploit the conflict that could be imagined if humans reached a point of diminishing resources. Back in 1967, even before the publication of Paul Ehrlich's *Population Bomb* (Ehrlich 1968),

Harry Harrison (1967) wrote a widely read book called *Make Room!Make Room!*, which in 1973 was made into a popular film called *Soylent Green*. This was a science fiction movie starring Charlton Heston and Edward G. Robinson in which they confront life way in the future in 2022 (oops, that's coming right up). This is a world suffering from overpopulation, depleted resources, poverty, dying oceans, and a hot climate due to the greenhouse effect—where much of the population survives on processed food rations, including "soylent green," which turns out to be "recycled" humans. A lot of similarly themed books and movies have come along since then, including one of my favorites, Dan Brown's best-selling book, *Inferno* (2013). In this thriller, a "brilliant lunatic" geneticist buys completely into a Malthusian "mathematical" view of the world (see Chapter 3 for a fuller discussion of Malthus) that humans will breed themselves into extinction, and so he unleashes a vector virus into the world to induce sterility.

Having thus far escaped these frightening scenarios, it is tempting to think that population growth has not really yet had much of an impact on civil society. That's because the real impact is harder to see, even if very real. It sort of creeps up on us one age group at a time, forcing families, communities, and then societies to adjust in some way or another. One reaction to population growth is to accept or even embrace the change and then seek positive solutions to the dilemmas presented by an increasingly larger (or smaller, for that matter) younger population (or older population)—you get the idea. Another reaction, of course, is to reject change. This is what the Taliban has been trying to do for decades in parts of Afghanistan and Pakistan—to prevent a society from modernizing by force and, in the process, keeping death rates higher than they might otherwise be (you will learn in Chapter 5 that Afghanistan has one of the highest rates of maternal mortality in the world, not to mention the deaths from the violence there), and maintaining women in an inferior status by withholding access to education, paid employment, health care, and the means of preventing pregnancy. The difficulty the Taliban (or any similar group) faces (besides active military intervention to stop them) is that it is very hard, if not impossible, to put the genie back in the bottle once people have been given access to a longer life and the freedoms that are inherently associated with that. Very few people in the world prefer to go back to the "traditional" life of harsh exposure to disease, oppression, and death.

The essay accompanying this chapter reviews the demographics of the Middle East and North Africa (MENA) region of the world, where we can see with special clarity the crucial role that demography has played for several decades now. For example, the migration of poor rural peasants to the cities of Iran, especially Tehran, contributed to the political revolution in that country back in 1978 by creating a pool of young, unemployed men who were ready recruits to the cause of overthrowing the existing government (Kazemi 1980; Lutz et al. 2010), and this pattern has been repeated throughout the region. It has been said that the "dogs of war" (with no disrespect meant to dogs) are young and male (Mesquida and Wiener 1999), and this description applies especially to the MENA region, where large fractions of the population are young, increasingly well educated, and frustrated by the lack of jobs, and where males are routinely accorded higher status than females.

The basic characteristic of a youth bulge is that a large fraction of the total population falls into the age range of approximately 15 to 29—old enough to be considered a young adult, but still young enough not to necessarily have settled into a job and family. We might think of this as an "incendiary" age group. If a country or region has too many people in this age cohort relative to the rest of the population, and they have a reason to be unhappy, trouble might be around the corner—it just needs some spark to ignite it (Weeks and Fugate 2012). Nearly a half-century ago, Moller (1968:246) argued that "in non-western nations, the outlook for young revolutionaries appears brightest where the poverty and insecurity of an underdeveloped but changing economy coincides with a high proportion of adolescents and young adults." This still seems like an accurate assessment of how demography and society interact to produce movements like Al-Qaeda.

Sub-Saharan Africa is another part of the world where population growth has been increasing faster than resources can be generated to support it—despite the devastation caused by HIV/AIDS—increasing the level of poverty and disease, and encouraging child labor, slavery, despair, and violent ethno-nationalist conflict (Wimmer et al. 2009). Throughout sub-Saharan Africa, the large number of children enmeshed in poverty and often orphaned because their parents have died of AIDS provides recruits for rebel armies waging warfare against one government or another. Those children who resist the army recruiters may find themselves sold into slavery, which is part of a larger global problem of child trafficking (International Labour Organization 2013). This kind of abuse of children is not caused by demographic trends, but the demographic structure of society contributes to the problem by creating a situation where disproportionate numbers of children are available to be exploited.

Globalization Regional conflict is one response to population growth, but a less violent, albeit still controversial, response has been globalization. Let me explain. Most broadly, globalization can be thought of as an increasing level of connectedness among and between people and places all over the world, although the term has taken on a more politically charged dimension since many people interpret it to mean a penetration of less developed nations by multinational companies from the more developed nations. This trend is promoted by the removal of trade barriers that protect local industries and by the integration of local and regional economies into a larger world arena. The pros and cons of this process invite heated debate, but an important, yet generally ignored, element of globalization is that it is closely related to the enormous increase in worldwide population growth that took place after the end of World War II.

Control over mortality, which has permitted the growth of population, occurred first in the countries of Europe and North America, and it was there that population first began to grow rapidly in the modern world, gaining steam in the late nineteenth and early twentieth centuries. However, after World War II, death control technology was spread globally, especially through the work of various UN agencies, funded by the governments of the richer countries. Since declines in mortality initially affect infants more than any other age group, there tends to be a somewhat delayed reaction in the realization of the effects of a mortality decline until those

DEMOGRAPHIC CONTRIBUTIONS TO THE "MESS IN THE MIDDLE EAST"

The Middle East and North Africa (MENA) region of the world refers to the following countries: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen (see accompanying map and data table). The population of the MENA is mostly, although not entirely, Arab, and has been in demographic and political flux for a very long time.

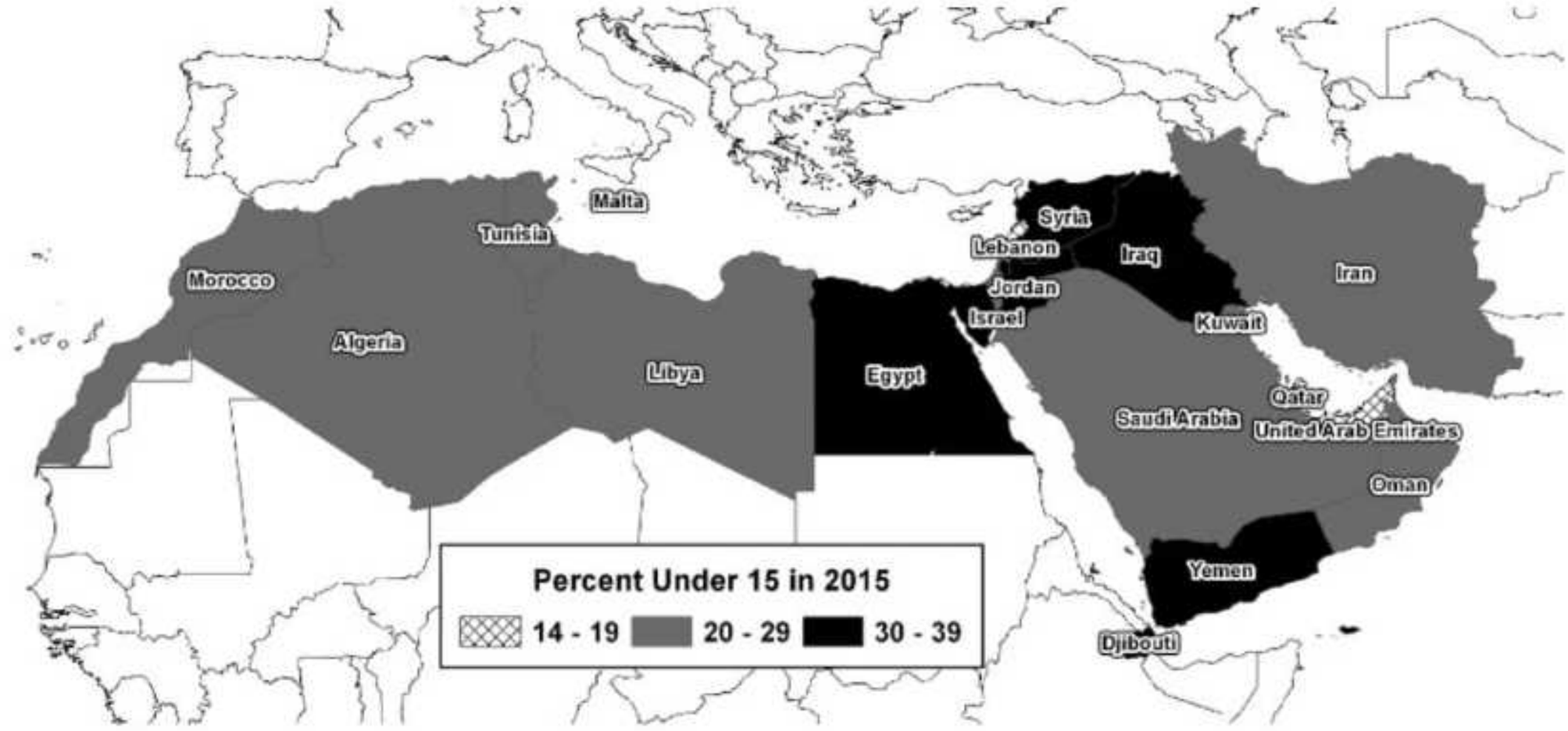
The long-simmering tensions flared dramatically when a young Tunisian fruit vendor, Mohamed Bouazizi, was humiliated one time too many by a corrupt system and set himself on fire in protest in December 2010. His act of self-immolation in Tunisia ignited a wild fire that spread throughout the entire region. Thus began the Arab Spring or Arab Awakening that brought down not only the government of Tunisia, but also Libya and Egypt, and sparked a long civil war in Syria.

The politics underpinning the uprising stretch back decades, with the region especially roiled by the creation of the state of Israel in the late 1940s. At the end of World War I, the British took control of Palestine, which included the territory of what is now modern Israel and Jordan, from the remnants of the Ottoman Empire. As early as 1917, under the Balfour Declaration, the British had already agreed to help establish a Jewish national home in Palestine. Then, in the 1930s and 1940s, when European anti-Semitism encouraged the mass migration of Jews to Palestine, the resulting change in the demographics of the region led inexorably in the direction of a Jewish state. Not unexpectedly, this influx of European Jews was resisted, first by Palestinian Arabs and subsequently by virtually all Arab states.

In 1946, at the end of World War II, the modern state of Jordan was granted full independence, and Britain handed the decision about Palestine to the United Nations. Then, in 1947 the United Nations passed General Assembly Resolution 181, which ". . . provided for the creation of two states, one Arab and the other Jewish, in Palestine, and an international regime for Jerusalem. The Zionists approved of the plan, but the Arabs, having already rejected an earlier, more favorable (for them) partition offer from Britain, stood firm in their demand for sovereignty over Palestine in full" (Oren 2002:4). The stage was thus set for the continuing struggle for control of the region. The nascent state of Israel was immediately attacked by armies from all surrounding Arab nations but managed to prevail, and when hostilities ended in 1949 Israel had claimed more territory than originally allotted to it by the United Nations. Because as many as 750,000 of Palestine's Arabs (who came to be known simply as Palestinians) had fled the area when fighting broke out, the Jewish population emerged as the demographic majority. The Palestinian population was effectively cordoned into the Gaza Strip and the West Bank.

During the more than half century that the creation and continued existence of Israel has been a political issue on the world stage, the entire MENA region has been increasing dramatically in population size—always a powerful underlying force for change. The accompanying table shows that in 1950 MENA had a population of 81 million—almost exactly the same as the population of Japan in that year. But the estimated MENA population in 2015 will be 418 million—a 500 percent increase! By comparison, Japan had increased to only 126 million in 2015, only a 53 percent increase. The United Nations Population Division projects the MENA region to add nearly 200 million more people by 2050, to a whopping 604 million, while Japan is projected to decline down to 108 million.

As both populations and political tension explode, the region is also pushing hard against its environmental constraints—especially water. Thomas Friedman, writing in the *New York Times*, produced a very cogent analysis of the situation: "All these tensions over land, water and food are telling us something: The Arab awakening was driven not only by political and economic stresses, but, less visibly, by environmental, population and climate stresses as well. If we focus only on the former and not the latter, we will never be able to help stabilize these societies" (Friedman 2012).



The Middle East and North Africa (MENA) Region

Source: See data in accompanying table.

Population Data for MENA

Country	Population (millions) in: 1950	2015	2050	Ratio of: 2015/1950	2050/2015	% < 15 in 2015
Algeria	9	41	55	4.6	1.3	28
Bahrain	0	1	2	14.0	1.3	22
Djibouti	0	1	1	15.0	1.3	34
Egypt	21	85	122	4.0	1.4	31
Iran	17	79	101	4.6	1.3	24
Iraq	6	36	71	6.0	2.0	39
Israel	1	8	12	8.0	1.5	28
Jordan	1	8	12	16.0	1.5	33
Kuwait	0	4	6	18.0	1.8	25
Lebanon	1	5	5	5.0	1.0	19
Libya	1	6	8	5.7	1.3	29
Malta	0	0	0	1.3	1.0	14
Morocco	9	34	43	3.8	1.3	28

(Continued)

DEMOGRAPHIC CONTRIBUTIONS TO THE "MESS IN THE MIDDLE EAST" (CONTINUED)

Country	Population (millions) in: 1950	2015	2050	Ratio of: 2015/1950	2050/2015	% < 15 in 2015
Oman	1	4	5	8.4	1.2	22
Qatar	0	2	3	80.0	1.3	14
Saudi Arabia	3	30	40	10.0	1.3	28
Syria	3	22	37	7.3	1.7	35
Tunisia	3	11	13	3.7	1.2	23
United Arab Emirates	0	10	16	137.1	1.6	16
West Bank and Gaza (Palestine)	1	5	9	5.0	2.0	39
Yemen	5	26	43	5.4	1.7	39
MENA Region	81	418	604	5.1	1.4	29
United States	*103*					*19*
Germany	*70*					*13*
Japan	*82*					*13*

Source: United Nations Population Division, World Population Prospects, 2012 Revision: http://www.un.org/en/development/desa/population/ (accessed 2013). *Note that projections are based on the medium fertility assumptions.*

The World Bank (2008) notes that MENA is the most water-scarce region in the world, and it is getting worse as the population grows.

The potential for political volatility can be seen in the age structure as shown in the accompanying table and map. In the region as a whole, nearly a third (29 percent) of the population is under the age of 15, but there is a spatial cluster of countries from Libya to the west all the way over to Iraq to the east in which 30 percent or more are under 15. As these young people emerge into adulthood, they will be confronting societies that likely will not have the resources to provide them with good jobs and a satisfactory life. That is a highly incendiary situation. Somewhat ominously, the two areas with the highest percent under 15 (39 percent) are Palestine (the combination of Gaza and the West Bank) and Iraq. Yemen, a country known to harbor terrorists, also has 39 percent of its population under the age of 15. For perspective, in the United States, 19 percent are under 15, and in both Germany and Japan only 13 percent are that young.

The bottom line is that this region is on course to continue its extreme rate of population growth in the face of serious environmental constraints. This suggests that regional stability may be a long way away, especially when you consider that four of the countries considered to be the world's most corrupt (Libya, Iraq, Syria, and Yemen) are in the region (Transparency International 2013).

Discussion Questions: (1) What do you think is the relationship between population growth in the MENA region and armed conflict? **(2)** How do you think the status of women in the Middle East might be influencing both demographic and political trends?

children who would otherwise have died reach an age where they must be educated, clothed, fed, and jobs and homes must be created for them on a scale never before imagined.

As huge new cohorts of young people have come of age and needed jobs in developing countries, their willingness to work for relatively low wages has not gone unnoticed by manufacturers in North America, Europe, and Japan. Nor have big companies failed to notice the growing number of potential consumers for products, especially those aimed at younger people, who represent the bulk of the population in developing countries. Given the demographics, it should not be surprising to us that jobs have moved to the developing countries and that younger consumers in those countries have been encouraged to spend their new wages on products that are popular with younger people in the richer countries, including music, fast food, cars, mobile phones, and electronic games.

Globalization of the labor market exists, in essence, because of the nature of world demographic trends. At the same time, the sheer volume of population growth in less developed countries is not a guarantee that jobs will head their way from richer countries. The likelihood goes up with two other demographically related factors: (1) declining fertility; and (2) increasing education. If fertility falls swiftly after mortality has gone down, the age structure goes through a transition in which there is a bulge of young adults ready to work, but they are burdened neither by a lot of dependent younger siblings nor yet by a lot of dependent older people. As I will discuss in more detail in Chapter 8, this "demographic dividend" can be used to good advantage, especially if a country (think China) has also spent societal resources educating its children so that the young people can readily step up to jobs that might be moved there from richer countries.

Immigration Globalization of the labor force has significantly broadened the ancient relationship between jobs and geography by bringing jobs to people in developing countries. For most of human history, a lack of jobs meant that young people moved to where the jobs were (or, at least, where they thought they were). That still happens. Even as some jobs are heading to developing countries, many young people in those countries are headed to the richer countries, facilitated by what I call the "demographic fit" between the young age structures of developing countries and the aging populations in richer countries.

The transition from higher to lower fertility in North America, Europe, and East Asia, as well as Australia and New Zealand, has created a situation in all of these parts of the world in which the younger population is declining as a fraction of the total, creating holes in the labor force and concerns about who will pay the taxes necessary to fund the pensions and health care needs of the elderly. For a variety of reasons that I will discuss in Chapter 6, women in the richer countries are choosing to have fewer children than are required to replace the population. On the other side of the coin are developing countries where, even if the birth rate is declining (as it is in most places), it hasn't declined as fast as the death rate, and so the young population keeps getting larger year after year. Supply meets demand in this demographic fit scenario, as low fertility countries take in migrants from higher fertility nations.

The United States has been the most accepting of all countries in the world in terms of absolute numbers of immigrants, including both legal and undocumented, with Mexico leading the list of countries from which immigrants to the U.S. come. Canada has been most welcoming of any country in the world on the basis of immigrants per resident population, with Asians being the largest group entering Canada (a pattern followed also in Australia).

Not to be overlooked, of course, is the fact that the countries sending migrants have their own demographic issues that complement those of the richer countries. For example, in Mexico, fertility decline for a long time had lagged behind the drop in mortality, and the resulting high rates of population growth made it impossible for the Mexican economy to generate enough jobs for each year's crop of new workers. The resulting underemployment in Mexico (people work, but there is not enough work to constitute a full-time job) naturally increased the attractiveness of migrating to where better jobs are. This happens especially to be the United States, not just because the United States is next door, but because low rates of population growth there have left many jobs open, particularly at the lower end of the economic ladder. These positions have provided foreign laborers with a higher standard of living than they could have in Mexico. The demographic dynamics have been shifting, though, and it seems likely that the demographic fit between the U.S. and Mexico is diminishing (Weeks and Weeks 2010). Fertility has been declining in Mexico, thus lowering the number of young people looking for work. This has helped the Mexican economy recover from the Great Recession of the first decade of this century, with the result that the supply of people thinking about heading to the U.S. has gone down. At the same time, the recent cohorts of immigrants to the U.S. have been having children, bolstering the number of younger people, and this, in combination with the slow recovery from the Great Recession, has lowered the demand for immigrant labor.

Because of limits on the number of legal immigrants admitted each year from specific countries in the world (see Chapter 7 for more details), a large fraction of those migrating from Mexico to the U.S. do so without documentation. However, since the terrorist attacks of September 11, 2001, undocumented immigrants have found it more difficult to enter the United States. As a consequence, many Latin American migrants have been going to Europe instead, both legally and illegally. The open-border policy within the European Union (EU) means that once people enter Europe, they are free to travel to any of the other EU countries in search of a job. Not surprisingly, Spain is the largest recipient of predominantly Spanish-speaking immigrants, but Switzerland and Italy also include growing communities of Latin Americans. There is a certain amount of symmetry, one might say, in the fact that the migration of Spaniards to the New World created "Latin America" from the mixing of Europeans with the indigenous population; now, five centuries later, the current is reversing.

There is, in fact, a bigger vacuum of laborers in Europe than in North America, because European birth rates have been declining for several decades and are now considerably lower than in the United States. There is thus the "sucking sound" of people from developing nations, notably former European colonies, filling the jobs in Europe that would otherwise go begging. The United Kingdom has large

immigrant populations from India, Pakistan, and the Caribbean, whereas France has immigrants from Algeria and Senegal, Germany has immigrants from Turkey (not a former colony, but a sympathizer in both world wars), the Netherlands has immigrants from Indonesia, and Spain has immigrants from Morocco (along with those from Latin America). Europeans, however, are not necessarily in favor of this trend. Caldwell (2009) has documented the rise in anti-foreigner sentiment in Europe, aimed especially at Muslim immigrants, and politicians throughout Europe are increasingly being forced by voters to take a stand on immigration issues (Winter and Teitelbaum 2013).

Given the needs in European countries for laborers and the complementary surplus of laborers in developing countries, we can expect that immigration will quite literally change the face of Europe in your lifetime. The "demographic time bomb" of an aging European population (Kempe 2006) means that these countries could make good use of immigrants in place of the babies that aren't being born, but the problem is always that immigrants tend to be different. They may look different, have a different language, a different religion, and differ in their expectations about how society operates. Furthermore, since the immigrants tend to be young adults, they will wind up contributing disproportionately to the birth rate in their new countries, leading to a rapid and profound shift in the ethnic composition of the younger population. These differences create problems for all societies and create situations of backlash against immigrants.

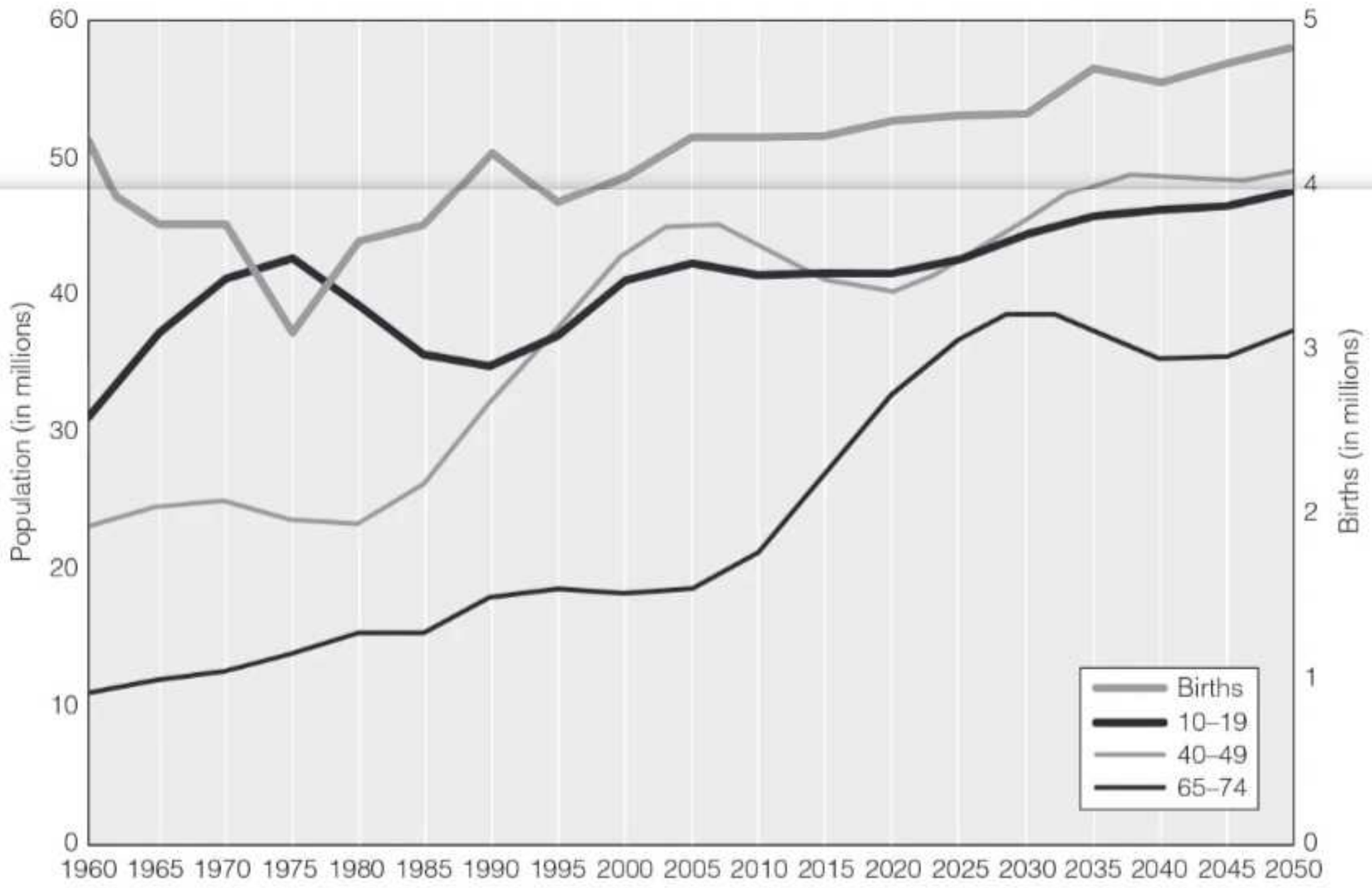
American history is replete with stories of discrimination against immigrant groups for one or more generations until the children and grandchildren of immigrants finally are accepted as part of mainstream society. This process produces children who would not be recognizable to their ancestors and a society that is a foreign country relative to the past, as I discussed earlier in the chapter. Just as in the United States, European nations have highly visible anti-immigrant groups, but the immigrants have kept coming anyway because jobs were especially available in the run-up to the Great Recession, and are starting to come back again in the post-recession economic recovery.

By contrast, immigrants have not bolstered Japan's rapidly aging population because the level of anti-foreign sentiment is so high. The Japanese simply take it for granted that people from other countries will not become permanent members of Japanese society. This means that Japan has had fewer immigrant workers per person than North America or Europe, and it is not unreasonable to think that the Japanese economy has been moribund for many years now because it has not been invigorated by immigration.

Riding the Age Wave Grappling with uncertainty in the world requires more than guesswork, warned the late business guru Peter Drucker. It requires looking at "what has already happened that will create the future. The first place to look," said Drucker, "is in demographics" (quoted in Russell 1999:54). A key demographic with which societies must cope is the changing age structure. For example, if we go back only a few decades, we find that the demographics of the baby boom helped fuel inflation in the United States during the 1970s as government policies in that period were oriented toward creating new jobs for the swelling numbers of

labor force entrants, directly contributing to inflation through government expenditures. This same bulge in the young adult male population also contributed to the ability of the United States to get as involved as it did in the Vietnam War—the "dogs of war" phenomenon mentioned earlier in connection with current issues in the Middle East.

The baby boom is still having an impact, but now the big question has become: How will the country finance the retirement and the health care needs of baby boomers as they age and retire? Most of the richest nations, but also China, are facing similar issues as declining fertility and increased longevity have contributed to the prospect of substantial increases in both the number and percentage of the older population (see Figure 1.2). As the older cohorts begin to squeeze national systems of social insurance, legislative action will be required to make long-run changes in the financing and benefit structure of these systems if they are to survive. As noted above and as I will discuss later in the book, immigration is one solution, but it comes with a lot of other costs attached. Changes will be made, of course, even if their exact shape is difficult to forecast. Delaying retirement is probably the easiest change to make, at least in the abstract. At the individual level, of course, few people want to make that choice to keep working for a few more years after spending their working life thinking that they were going to retire at a relatively young age. Increased self-reliance is another proposed solution, requiring people when younger to save for their own retirement through mandatory contributions to mutual funds



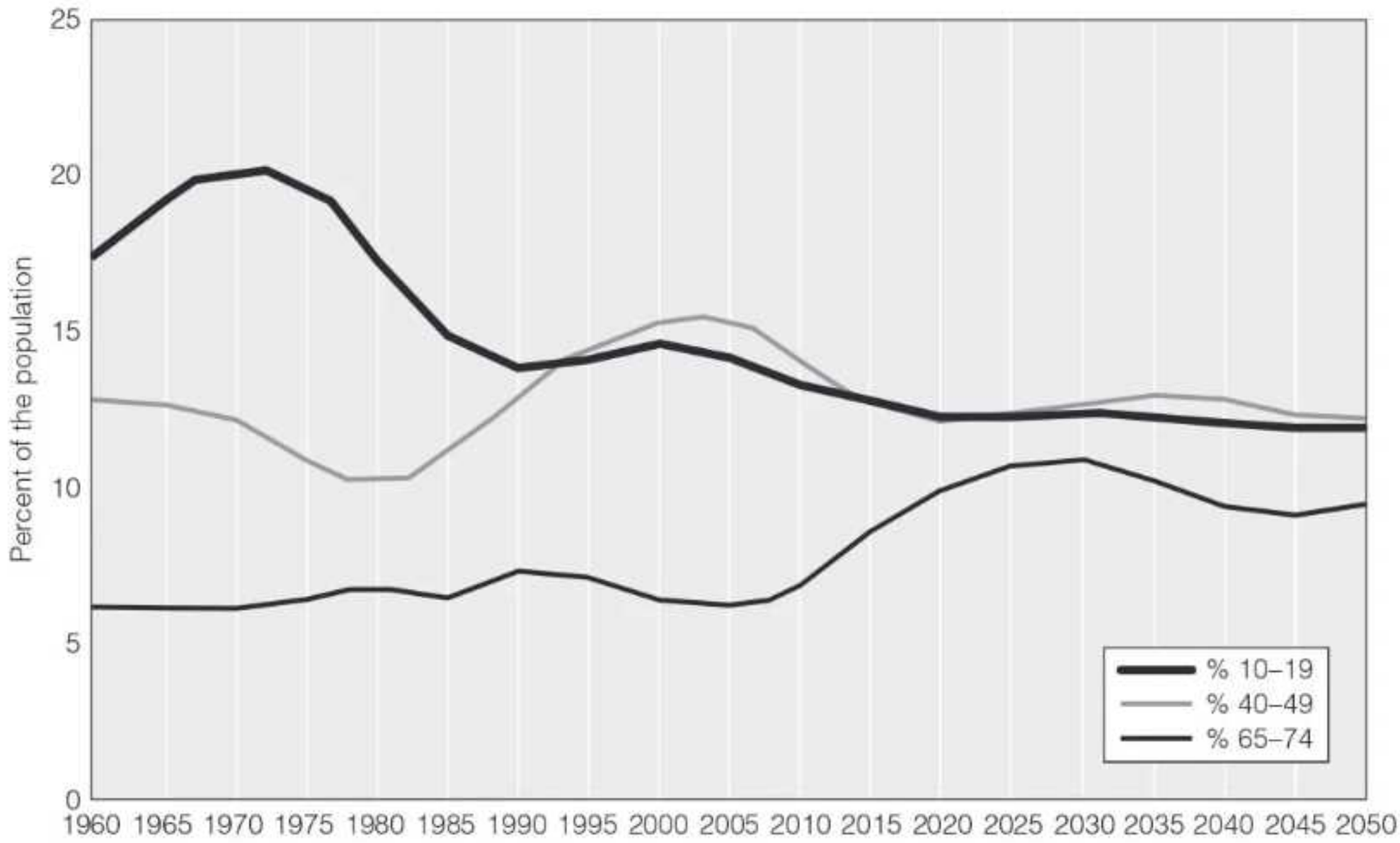


Figure 1.2 Riding the Age Wave: Number (top panel) and percentage (bottom panel) of selected age groups in the United States.

Source: Data for births 1960 to 1975 are from U.S. Census Bureau, 1996, Statistical Abstract of the United States (Washington, DC: Government Printing Office); Table 90; births for 1980 to 2010 are from the U.S. National Center for Health Statistics Vital Statistics Reports (various years); age data from 1960 to 2010 are from the United Nations Population Division; age and birth data from 2015 to 2050 are from the U.S. Census Bureau's National Population Projections (updated 2012): http://www.census.gov/population/projections/data/national/2012.html

and other investment instruments. It may also be, when the time comes, that taxes will be raised on younger people in order to bail out older people who, in fact, did not save enough for their retirement.

The changing age structure also has an obvious impact on the educational system. Public elementary and secondary school districts cannot readily recruit students or market their services to new prospects; they rise and fall on demographic currents that determine enrollment and the characteristics of students, such as English proficiency, that can affect resource demands. Of course, not every community experiences the wavy national trend shown in Figure 1.2; there is variation among and between individual school districts. All have a need for precise information about their particular area, because even within a district some geographic areas may be growing while others are diminishing in the number of school-aged children or children of one ethnic group or another. Demographic conditions can also affect a school district in ways that go beyond the numbers. Adult immigrants to the United States from Latin America, for example, tend to have low levels of education, so they may have relatively little experience with schools even in their native country, much less in the United States. When their children start attending

school, they may be generally unable to help them with schoolwork. Since parental involvement is a key ingredient in student success, school districts are faced with the need to create new policies and programs to educate immigrant parents about what their children are experiencing in school.

The same age structure changes that influence the educational system also have an impact on the health care industry. Over the years, hospitals and other health care providers have learned that they have to reposition themselves in a classic marketing sense to meet the needs of a society that is changing demographically (Beckett and Morrison 2010). In countries like the United States, health care is now less about birthing and coping with childhood illnesses, and more about treating the chronic diseases that beset an older population.

Crime, like health, is closely tied to the age and sex structure of a community. Young people, especially young males, are more likely to commit crimes than anyone else (yet more "dogs of war"). Given that fact, it is not a surprise that the crime rate in the United States has been declining roughly in tandem with the decline in the percentage of the population that is comprised of teenagers and young adults. Babies born in 1964 are the last of the baby boomers in the U.S. and as they reached their teens in the mid-1970s, there was both a peak in the number and percentage of people aged 10-19 and in the crime rate in the U.S., especially violent crime. The rate has continued to decline since then, with a bump in the 1990s as the baby boomlet kids hit the crime-prone years.

The vast majority of people of any age, of course, are not criminals. But, almost all are consumers, and people at different ages have different needs and tastes for products and differing amounts of money to spend. Companies catering to the youngest age group have to keep track of the number of births (their potential market) as well as the characteristics of the parents and grandparents (who spend the money on behalf of the babies). The baby market has seen some wild fluctuations in recent decades in the United States, as you can see in Figure 1.2. The number of babies being born each year plummeted during the 1960s and 1970s, rebounded in the 1980s, peaked in 1990, and slacked off in the early 1990s before rebounding again. The U.S. Census Bureau projects the number of births to continue rising steadily for the foreseeable future. It is a dangerous business, however, to be lulled into believing that every company dealing with baby products will necessarily live or die on the peaks and troughs of birth cycles. In 2012, there were 3.9 million births in the United States, not far below the number at the height of the baby boom in 1958. Yet, in 2012 there were 1.6 million *first* births, compared to only 1.1 million in 1958. If you have hung around new parents and new grandparents, you know that people react differently to first births than to others. In particular, they open their pocketbooks wider to pay for cribs, buggies, strollers, diapers, and every conceivable type of baby toy designed to stimulate and "improve the quality" of the baby's life. Businesses that cater to these needs, then, are as sensitive to birth order as they are to the absolute volume of births.

The middle age group (represented in Figure 1.2 by people aged 40 to 49) was relatively unchanged in size since the 1960s and essentially unnoticed until the baby boom generation began moving into this category in the 1980s. Since then, serving them has become a new "boom" industry. Laser eye surgery surged, as did sales

of walking shoes (running shoe sales slowed to a walk for boomers). When not walking, the aging baby boomers have been driving their luxury or near-luxury sport utility vehicles (and are now snapping up hybrid cars). It was the baby boom reaching middle age that helped to fatten the nonfat market, although younger people rather than baby boomers have led the movement toward vegetarian meals (Stahler 2012). They will probably carry those food preferences into their middle ages at a time when the number of people 40 to 49 will dip, as the baby boomers are replaced by the smaller cohort of Generation X.

The young-old population (ages 65 to 74) has been steadily increasing in numbers over time and, as you will learn in Chapter 8, has also become increasingly affluent. This segment of the population creates a market for a variety of things, from leisure travel to appliances with larger print, to door handles that are shaped to be used more easily by arthritic fingers. Perhaps most importantly, the aging of the population in North America has spurred the marketing of health services and products aimed at that age group, and the targeting of their wares to neighborhoods where people are aging in place (so-called naturally occurring retirement communities—NORC) (Morrison and Bryan 2010).

Johnson & Johnson provides a good example of a company that has kept its eye on the changing demographics not only of the United States but of the world in general. The company got its start in the 1880s when Robert Wood Johnson began selling sterile bandages and surgical products—innovations built on Lister's germ theory that helped to lower death rates in hospitals. Later on, during the years of the baby boom, Johnson & Johnson flourished by selling baby products. As the baby boom waned, the company continued to diversify its product line in a demographically relevant way, including acquiring ownership of both Ortho Pharmaceuticals (the largest U.S. manufacturer of contraceptives—helping to keep the birth rate low—and a large manufacturer of drugs to treat chronic diseases associated with aging) and Tylenol (one of the world's most popular pain relievers).

Basically, making sound investment decisions (as opposed to lucky ones) involves peering into the future, forecasting likely scenarios, and then acting on the basis of what seems likely to happen. After reading this book, you should have a good feel for the shape of things to come demographically. Most people do not, but those who do have an edge in life. A group of financial investors in the United Kingdom, for example, has established the Life and Longevity Markets Association in an attempt to spur the development of ways to make money from the pension funds into which an increasingly older population is pouring money. If people die sooner than expected, insurance companies lose money; whereas if they live longer than expected, the insurance companies reap a profit. The flip side of this is that if people live longer than expected, pension funds may be underfunded; whereas the pension funds profit if people die sooner, rather than later. You can see that people are betting one way or the other on your demographic future.

What else do the demographics suggest about future economic opportunities? The fact that 90 percent of the world's population growth in the foreseeable future will occur in the less developed nations is, as already noted, an important reason for the globalization of business and the internationalization of investment.

In 2012 two financial analysts in California put together a demographic-economic model of 176 countries of the world. Their conclusion was that age structures with a disproportionate share of people of working age are good for economic growth (economies with a demographic tailwind), and age structures with lots of kids or lots of older people are not so good (economies with a headwind). They summarize the situation as follows (Arnott and Chaves 2012:42):

> Children are not immediately helpful to GDP. They do not contribute to it, nor do they help stock and bond market returns in any meaningful way; their parents are likely disinvesting to pay their support. Young adults are the driving force in GDP growth; they are the sources of innovation and entrepreneurial spirit. But they are not yet investing; they are overspending against their future human capital. Middle-aged adults are the engine for capital market returns; they are in their prime for income, savings, and investments. And senior citizens contribute to neither GDP growth nor stock and bond market returns; they disinvest to buy goods and services that they no longer produce.

All is not lost, however, in those countries with lots of kids, because each one needs some kind of diaper. Procter & Gamble, maker of Pampers disposable diapers, has found a huge market out there. Babies grow up to be teenagers and young adults (trends that we will examine in detail throughout the book). From Malaysia to Argentina, young adults are buying iPads, cell phones, handheld electronic games, satellite dishes, and the perennial favorites, blue jeans and Coca-Cola. Companies selling in these markets are bound to make money.

International investors have been particularly intrigued by the world's two most populous countries, China and India. General Motors, Chrysler, and Ford all have invested in car manufacturing in China, as have Volkswagen and Peugeot Citroën from Europe. The problem, of course, is that a huge population does not necessarily mean a huge market if most people are poor. Starbucks serves coffee and Pizza Hut and McDonald's serve up fast food in China, but the average Chinese consumer cannot afford very many expensive goods. Enter Wal-Mart, which opened its first store in China in the mid-1990s and had 390 stores there as of 2013 (Walmart Stores 2013).

India, which is almost as populous, but is less well-off than China, does not yet allow full foreign ownership of retail businesses, except in very limited cases, but the so-called "consuming class" in India (those with at least some discretionary income, although it may be as low as $2 per day) is estimated to comprise about 300 million people (Mustafi 2013). This is about 25 percent of the population, yet it is a big market and thus represents an opportunity for some people to make money. Yum Brands, Inc., based in Louisville, Kentucky, which owns Pizza Hut, KFC, and Taco Bell (among other fast-food franchises), decided in 2010 that the growing young adult population (the youth bulge) in India represented a good market for Mexican food, and so they opened a Taco Bell in Bangalore focusing on the vegetarian aspects of their menu (Sharma 2013). Though we will return repeatedly to this paradox that many people (the "street") have a gut feeling that population growth is a good thing, we have no idea if we can sustain it, and if we can't, then what?

The Relationship of Population to Rights of Women There is probably no more important demographic issue than the rights of women. As I discuss in Chapter 5, women inherently have higher life expectancy than men, unless society intervenes to undermine that biological advantage. The other biological issue—reproduction—rears its head when society seeks to prevent women from controlling their own reproductive behavior, as I discuss in Chapter 6. In social terms, all evidence shows that men and women are equally able to be good or bad parents, equally able to become educated and succeed (or not) occupationally and economically, equally able to lead societies politically. Any group that oppresses women and suppresses their contributions will have a distinctively unfavorable demographic profile and will almost certainly suffer in terms of overall well-being. This theme will emerge regularly in subsequent chapters.

How Is the Book Organized?

In order to help you understand how the world works demographically in more detail, I have organized the book into four parts, each building on the previous one. This first chapter obviously is designed to introduce you to the field of population studies and illustrate why this is such an important topic. The second chapter reviews world population trends so that you have a good idea of what is happening in the world demographically, how we got to this point, and where we seem to be heading. The third chapter introduces you to the major perspectives or ways of thinking about population growth and change, and the fourth chapter reviews the sources of data that form the basis of our understanding of demographic trends.

In Part Two, "Population Processes," I discuss the three basic demographic processes whose transitions are transforming the world—the health and mortality transition (Chapter 5), the fertility transition (Chapter 6), and the migration transition (Chapter 7). Knowledge of these three population processes and transitions provides you with the foundation you need to understand why changes occur and what might be done about them.

Part Three, "Population Structure and Characteristics," is devoted to studying the interaction of the population processes and societal change that occur as fertility, mortality, and migration change. These include the age transition (Chapter 8), the urban transition (Chapter 9), and the family and household transition (Chapter 10). The fourth and final part of the book, "Using the Demographic Perspective," first explores the relationship between population and sustainability (Chapter 11): Can economic growth and development be sustained in the face of continued population growth? There are no simple answers, but we are faced with a future in which we will have to deal with the global and local consequences of a larger and constantly changing population. In Chapter 12, I review what lies ahead demographically and discuss the ways in which the global community is trying to cope politically with these changes as they alter the fabric of human society.

Summary and Conclusion

It is an often-repeated phrase that "demography is destiny," and the goal of this book is to help you to cope with the demographic part of your own destiny and that of your community, and to better understand the changes occurring all over the world. Demographic analysis helps you do this by seeking out both the causes and the consequences of population change. The absolute size of population change is very important, as is the rate of change, and of course, the direction (growth or decline).

The past 200 years have witnessed almost nonstop growth in most places in the world, but the rate is slowing down, even though we are continuing to add nearly 9,000 people to the world's total every hour of every day. You may not realize it, but everything happening around you is influenced by demographic events close to you as well as in faraway places. I refer not just to the big things like regional conflict, globalization, climate change, exhaustion of resources, and massive migration movements, but even to little things that affect you directly, like the kinds of stores that operate in your neighborhood, the goods that are stocked on your local supermarket shelf, the availability of a hospital emergency room, and the jobs aimed at college graduates in your community. Influential decision makers in government agencies, social and health organizations, and business firms now routinely base their actions at least partly on their assessment of the changing demographics of an area. So, both locally and globally, demographic forces are at work to change and challenge your future. The more you know about this, the better prepared you will be to deal with it (and perhaps even influence what the future will be). In the next chapter, I get you started on this by outlining the basic facts of the global demographic picture.

Main Points

1. Demography is concerned with everything that influences or can be influenced by population size, growth or decline, processes, spatial distribution, structure, and characteristics.
2. Almost everything in your life has demographic underpinnings that you should understand.
3. Demography is a force in the world that influences every improvement in human well-being that the world has witnessed over the past few hundred years.
4. The past was very different from the present in large part because of demographic changes taking place all over the globe; and the future will be different for the same reasons.
5. The cornerstones of population studies are the processes of mortality (a deadly subject), fertility (a well-conceived topic), and migration (a moving experience).
6. Demographic change demands that societies adjust, thus forcing social change, but different societies will respond differently to these challenges, sometimes for the better, sometimes for the worse.

7. Examples of global issues that have deep and important demographic components include the relationship of population to food, water, and energy resources, as well as housing and infrastructure, and environmental degradation.
8. Population is also connected to social and political dynamics such as regional conflict, often exacerbated by youth bulges, as well as globalization, the need for immigrants created by the phenomenon of "demographic fit" and then the backlash against those immigrants.
9. Changes in the age structure are the most obvious ways in which demography forces societal change and, at the same time, creates business opportunities—exemplified by the idea of "riding the age wave."
10. A key to all demographic trends in the world is the status of women.

Questions for Review

1. When did you first become aware of demography or population issues more broadly, and what were the things that initially seemed to be important to you?
2. Why is the idea that nearly everything is connected to demography, or the companion idea that demography is destiny, not the same as demographic determinism?
3. How do you think the politics of the Middle East and North Africa (MENA) will be influenced in the long term by the changing demographics of the region?
4. Discuss the relative advantages and disadvantages of a youth bulge for a society to deal with.
5. Because globalization has an underlying demographic component, how might that affect the investing patterns of someone who uses demography as one of their investment criteria?

Websites of Interest

Remember that websites are not as permanent as books and journals, so I cannot guarantee that each of the following websites still exists at the moment you are reading this. You may have to Google the name of the organization to find the current web address.

1. **http://www.census.gov**
   The website of the U.S. Census Bureau has many useful features, including U.S. and world population information and U.S. and world population clocks (where you can check the latest estimate of the total U.S. and world populations).
2. **http://www.prb.org**
   The Population Reference Bureau (PRB) in Washington, D.C., is a world leader in developing and distributing population information. The site includes regularly updated information about PRB's own activities, as well as links to a wide range of other population-related websites all over the world.

3. **http://www.un.org/en/development/desa/population/**
   The Population Division of the United Nations is the single most important producer of global demographic information, which can be accessed at this site. Closely related United Nations data can be accessed through **http://data.un.org.**
4. **http://www.poodwaddle.com/clocks/worldclock/**
   This website keeps track of a wide range of demographic data from various official sources and then produces estimates that are constantly being updated (thus, they are called "clocks") by extrapolation models.
5. **http://weekspopulation.blogspot.com/search/label/Introduction%20to%20Demography**
   Keep track of the latest news related to this chapter by visiting my WeeksPopulation website.