

# Utah Economic and Business Review

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## Highlights

- Utah is in the midst of an unprecedented economic, demographic, and cultural transformation that has its origins in national and international trends. The cumulative impact of these trends is that Utah, along with the rest of the nation, will continue to become much more diverse in many ways, including age, culture, language, nativity, race, ethnicity, religion, and socioeconomics.
- Two major population trends driving changes are 1) the continued arrival of record numbers of young, working-age immigrants and 2) the aging of the population, which is the combined result of the post-WWII Baby Boom approaching retirement and increasing life expectancy.
- Utah, along with the intermountain region, has emerged as a net in-migration (growth) region. As Utah has incorporated these new populations and has become more fully integrated into global markets, its signature demographics remain but have followed national trends.
- Racial and ethnic minorities are estimated to be 18% of the Utah population, 24% in Salt Lake County, and 35% for the U.S. in 2007. By 2050, these proportions are expected to increase to 30%, 41%, and 54% respectively.
- Increase in ethnic and racial diversity represents a generational shift, as nearly one-fourth of preschool-age persons in Utah and one-third in Salt Lake County in 2007 were estimated to be racial or ethnic minorities. In contrast, less than 10% of retirement-age Utahns were estimated to be minorities.
- Populations of youth, working-age, and elderly in Utah are all projected to increase, with the greatest rates of increase in the oldest age groups. Within a generation, the 60-and-older population is expected to exceed the school-age population in Utah.
- As adults, the youth of today will carry a greater demographic burden than their parents' generation. Besides supporting the highest youth population per capita of any state, they will be asked to support an increasing share of elderly. Working-age Utahns are projected to decline from 60% of the population in 2010 to 53% in 2050 (compared with 63% and 57% nationally).
- Cumulatively, these trends have far-reaching implications for our future, and require the effective reengineering of a broad spectrum of our investments from human capital (education, labor force development, etc.) to our built environment (housing, transportation, etc.).

## Utah's Demographic Transformation: A View into the Future

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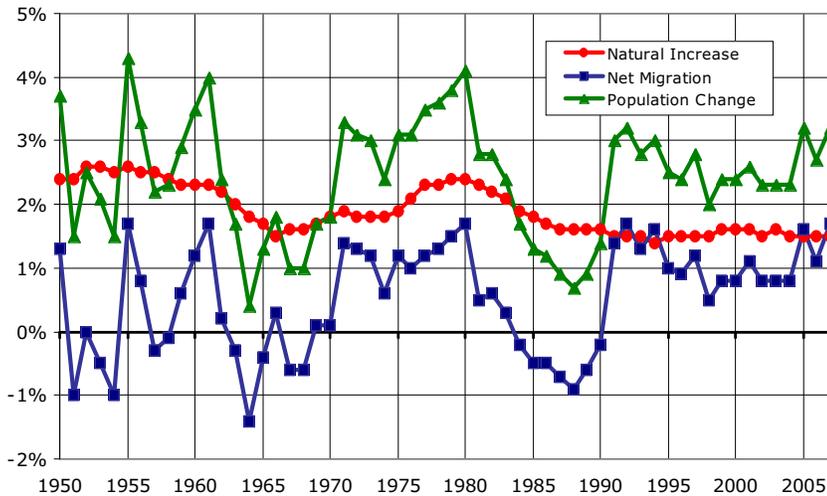
### Introduction

Utah, along with the rest of the nation, is in the midst of an extraordinary demographic transformation which has far from run its course. The confluence of four major trends continues to dramatically reshape the size and composition of the national and state populations. These trends include the arrival of immigrants in record numbers, beginning in the 1980s and continuing for at least another generation. This most recent group of immigrants is very diverse, coming literally from throughout the world. Second, the post-WWII Baby Boom, which continues to numerically dominate the national age structure, is approaching retirement age. Third, while the fertility of native-born U.S. women has for decades been below replacement level, recent immigrants, who are concentrated in peak childbearing years, often have above-replacement-level fertility. Finally, life expectancy continues to increase, and this will result in many more people living to become very elderly, beyond 85 years of age.

While there are certainly regional and local variations in outcomes, it is clear that this demographic transformation is pervasive, ongoing, and irreversible.<sup>1</sup> In Utah, the stereotypic image of being forever young, white, and culturally homogenous is becoming obsolete, if it was ever really accurate. As is the case in many regions within the U.S., Utah does maintain a distinctive demographic character. However, it is also true that Utah has and will continue to be influenced by these larger national population dynamics. The cumulative impact of these trends is that Utah, along with the rest of the nation, will continue to become much more diverse in many ways, including age, culture, language, nativity, race, ethnicity, religion, and socioeconomics. The youth of today are coming of age in a much more multilingual, multicultural, and multiethnic society than was experienced by their parents and grandparents. This generational shift is occurring simultaneously with the rapid expansion of the retirement-age population. Cumulatively, these trends have far-reaching implications for the future of our communities and nation, and require the effective

<sup>1</sup> William H. Frey (2006) *America's Regional Demographics in the '00s Decade: The Role of Seniors, Boomers and New Minorities*. Washington, D.C.: The Brookings Institution.

**Figure 1**  
**Net Migration, Natural Increase, and Population Change:**  
**Annual Rates for Utah: 1950–2007**



Source: Bureau of Economic and Business Research, University of Utah analysis of Utah Population Estimates Committee data.

and more consistent net in-migration.<sup>3</sup> With the exception of the years 1984–1990, annual net migration rates have remained positive since 1970. After 1990, Utah has had sustained net in-migration, often at rates equal to those of natural increase. Notably, even when unemployment rose in the state (and for a period it actually lost jobs) between 2001 and 2003, people continued to come. As shown in Figure 1, this is a significant break with the past. Because young adults compose the majority of employment-based migration, this has reinforced the relative youth of the state and the region. The favorable labor market conditions, especially since 1990, have attracted a steady stream of workers to the state. These new residents have further contributed to population growth by bringing children and continuing to have them after they arrive.

The population of the nation is expected to remain younger and more rapidly growing than any of the other developed countries. Much of this growth is attributable to the continued arrival of immigrants and the future generations of their U.S.-born children and grandchildren. Simultaneously, the aging of the national Baby

reengineering of a broad spectrum of our investments from human capital (education, labor force development, etc.) to our built environment (housing, transportation, etc.).

This essay first identifies the Utah context, focusing on its relationship to regional growth patterns and its distinctive demographic characteristics. Next, trends in the magnitude and source regions of immigration to Utah are examined, followed by a discussion of the implications of these migration patterns for the changing racial and ethnic composition of the state. The historical birth pattern of the state is compared with that of the nation to highlight the basis of age structure differences. Next, projections of age structure are examined. Finally, a concluding section summarizes the major demographic trends shaping Utah's future and identifies implications for policy design today.

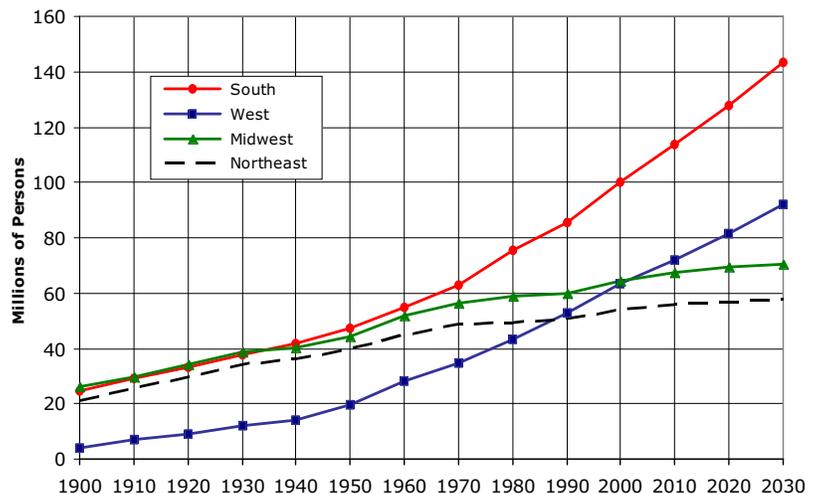
### Utah Emerges as Part of a Net In-Migration Region

Until about 1970, Utah remained somewhat geographically isolated as well as economically specialized, particularly in extractive and federal defense industries. This left the state vulnerable to the booms and busts of these industries, with net in-migration during the expansions and net out-migration during the contractions. Since then, the state's economy has grown significantly, simultaneously becoming much more diversified and more fully integrated into the national and international economies.<sup>2</sup> The Utah economy, along with that of the intermountain region, has grown more rapidly than the nation, generating relative economic opportunity

<sup>2</sup> Pamela S. Perlich (1994) "Diversification and the Utah Economy," pages 207–213 from *The Economic Report to the Governor*. Salt Lake City, Utah: Governor's Office of Planning and Budget.

and more consistent net in-migration.<sup>3</sup> With the exception of the years 1984–1990, annual net migration rates have remained positive since 1970. After 1990, Utah has had sustained net in-migration, often at rates equal to those of natural increase. Notably, even when unemployment rose in the state (and for a period it actually lost jobs) between 2001 and 2003, people continued to come. As shown in Figure 1, this is a significant break with the past. Because young adults compose the majority of employment-based migration, this has reinforced the relative youth of the state and the region. The favorable labor market conditions, especially since 1990, have attracted a steady stream of workers to the state. These new residents have further contributed to population growth by bringing children and continuing to have them after they arrive.

**Figure 2**  
**U.S. Population by Region: 1900–2030**



Source: U.S. Bureau of the Census; *Demographic Trends in the 20th Century* (2002) and *State Projections* (2005).

Boom (born 1946–1964) will create an age wave of persons 65 years and older, resulting in significant amenity-based retirement migration, as well as aging in place.<sup>4</sup> The gradual shift of the U.S. population to the South and West accelerated in the post-WWII era and is expected to continue into the future, meaning that these two regions will accommodate much of this growth (Figure 2).

<sup>3</sup> Pamela S. Perlich (2006) "Utah's Place in the Macro-Demographics of the U.S. in the 20th Century," *Utah Economic and Business Review*, Volume 66, Numbers 3 and 4.

<sup>4</sup> D.A. Plane, D.J. Henrie, and M.J. Perry (2005) "Migration Up and Down the Urban Hierarchy and Across the Life Course," pages 15312–15318 from *Proceedings of the National Academy of Sciences*, Volume 102, Number 43.

The South and West generated two-thirds of the nation's population growth in the twentieth century and this proportion is expected to expand to 90 percent in the 2000–2030 period.

Within the intermountain region, Arizona and Nevada accounted for over half (53 percent) of the regional population growth of the twentieth century, and are expected to remain the epicenter of regional growth for the foreseeable future. Utah is expected to grow more rapidly than the nation, but more moderately than Nevada and Arizona, as is shown in Figure 3.<sup>5</sup>

As Utah has incorporated these new populations and has become more integrated into the national and global economies, the signature demographic characteristics remain but have also been affected by national demographic

changes. Because it is the heartland of the Mormon Culture Region,<sup>6</sup> Utah has long had the youngest age at first marriage, highest fertility rate, largest household size, lowest median age, and most children per capita among all states. However, Utah has, especially over the past several decades, trended in the same direction as the nation, with increasing age at first marriage and median age of the population as well as declining fertility rates and household sizes. Estimated median age at first marriage for Utah males has recently risen from 23.9 (4-year average of 2000–2003) to 25.2 (2007), and for Utah females it has risen from 21.9 (4-year average of 2000–2003) to 22.8 (2007). Nationally, median age at first marriage has risen from 26.7 for males and 25.1 for females (4-year average 2000–2003) to 27.7 for males and 26.0 for females (2007).<sup>7</sup> Median age of the population was 28.5 in Utah and 36.6 in the U.S. in 2007, as compared with 27.1 in Utah and 35.3 in the U.S. in 2000.<sup>8</sup> Total fertility rates have declined from 4.3 children per woman in Utah and 3.6 in the U.S. in 1960 to 2.5 in Utah and 2.1 in the U.S. in 2006.<sup>9</sup> Persons per household fell from 3.15 in Utah and 2.63 in the U.S. in 1990 to 3.11 in Utah and 2.61 in the U.S. in 2007.<sup>10</sup> And, as has been the case nationally, a growing share of the more recent migrants to the state have come

<sup>5</sup> See Frank Hobbs and Nicole Stoops, U.S. Bureau of the Census (2002) Census 2000 Special Reports, Series CENSR-4, *Demographic Trends in the 20th Century*. Also see U.S. Bureau of the Census (2005) *Interim State Population Projections*, Table A1. Washington, DC: Population Division.

<sup>6</sup> D.W. Meinig (2004) "Other Wests," pages 269–77, *The Shaping of America: A Geographical Perspective on 500 Years of History, Volume 4: Global America, 1915–2000*. New Haven: Yale University Press.

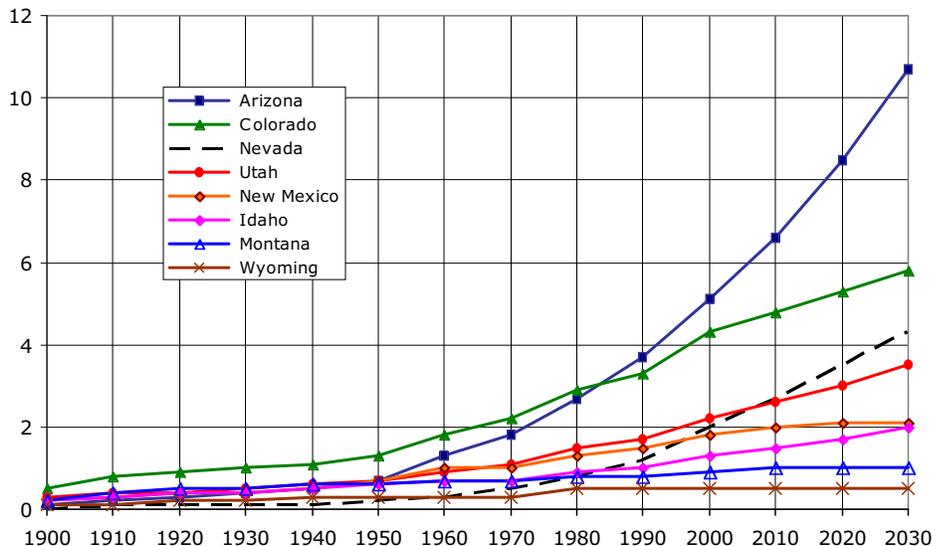
<sup>7</sup> U.S. Bureau of the Census, American Community Survey 2007, 2002–2003, Census Supplementary Survey 2000–2001.

<sup>8</sup> U.S. Bureau of the Census, 2000 Census of the Population (SF1), and 2007 Population Estimates from the Population Estimates Program.

<sup>9</sup> Utah Governor's Office of Planning and Budget, 2008 *Economic Report to the Governor*, page 43.

<sup>10</sup> U.S. Bureau of the Census, 1990 Census of the Population and 2007 American Community Survey (R1105).

**Figure 3**  
**U.S. Population by State, Mountain Division: 1900–2030**



Source: U.S. Bureau of the Census; *Demographic Trends in the 20th Century* (2002) and *State Projections* (2005).

from other countries, which is significantly increasing the cultural, linguistic, ethnic, racial, and religious diversity of the state. The minority share of the population has risen from 1.9 percent in Utah and 11.4 percent in the U.S. in 1960 to 17.7 percent for Utah and 34.0 percent for the U.S. in 2007.<sup>11</sup>

The bottom line is that Utah has become part of a long-term growth region in the nation, and it is simultaneously in the midst of a dramatic demographic transformation. Current and future population growth is not simply a duplication of the young and relatively homogeneous population of the past. Rather, Utah is becoming much more diverse along many socioeconomic dimensions, and these trends will continue for the foreseeable future.

### Immigrants Contribute to Population Growth

The following appeared as the lead story in *USA Today* on September 15, 2006:

#### IMMIGRANTS TURN UTAH INTO MINI-MELTING POT

By Haya El Nasser, USA TODAY

SALT LAKE CITY — In the shadow of the Mormon faith's majestic headquarters, the fountain at the center of the Gateway Plaza outdoor mall is a popular backdrop for weddings. On a scorching day, Hispanic and Anglo children run side by side through the pulsating sprays of water...

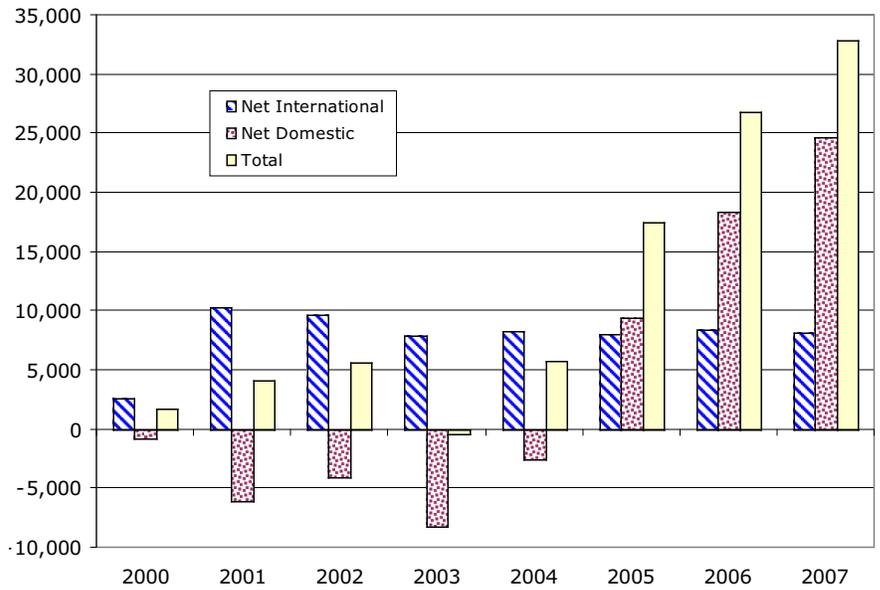
Immigration is changing the complexion of communities across the USA. As it sweeps through Utah, traditionally one of the least diverse and most conservative states in the nation, its impact is particularly dramatic. About 98% white until 1970, Utah is becoming a mini-melting pot...<sup>12</sup>

<sup>11</sup> U.S. Bureau of the Census, 1960 Census of the Population and Population Estimates Program, 2007 Population Estimates.

<sup>12</sup> *USA Today*, [http://www.usatoday.com/news/nation/2006-09-14-utah-cover\\_x.htm](http://www.usatoday.com/news/nation/2006-09-14-utah-cover_x.htm)

Over the past 30 years, immigrants have come to the U.S. and also to Utah in record numbers. International immigrants accounted for about half the net in-migration to Utah in the 1990s, directly contributing about a fifth of its population growth. During the economic expansion of the 1990s and the construction run-up to the 2002 Winter Olympic Games, Utah was a net exporter of population to other states and a net importer of population internationally. Among states in the western U.S., only California shared this pattern. Beginning in the 1990s and extending through 2004, the state would have had net out-migration on an annual basis if not for the net international in-migration (immigration) to the state.<sup>13</sup> For the 2000s, the Bureau of the Census estimates that cumulative net in-migration to Utah from 2000 through 2005 would have been negative if not for positive net international migration to the state. This is shown in Figure 4.<sup>14</sup>

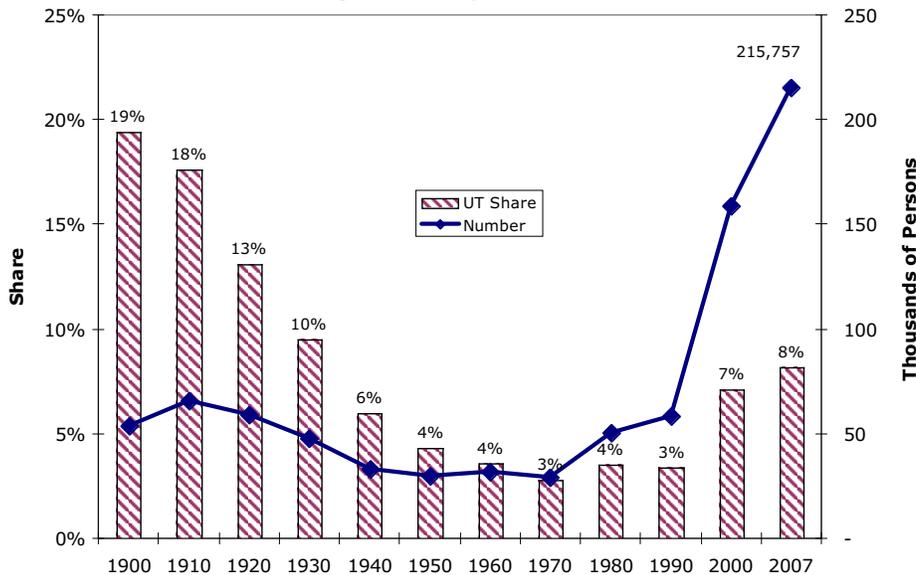
**Figure 4**  
State of Utah: Annual Net Migration, International and Domestic: 2000–2007



Source: U.S. Bureau of the Census, Population Estimates Program, NST-EST2007-alldata; ST-99-7.

Following national trends, immigration contributed significantly to population growth in Utah in the early twentieth century, while natural increase drove population increase mid-century. Immigration again contributed significantly to the population growth of both Utah and the nation beginning in 1980. Utah has been designated as one of the emerging gateways for immigrants, as foreign-born populations move beyond the traditional gateway states to new destinations.<sup>15</sup> The number and share of foreign born in Utah since 1900 are shown in Figure 5.

**Figure 5**  
Utah Foreign-Born Population: 1900–2007



Source: U.S. Bureau of the Census, Decennial Censuses and 2007 ACS.

Recent immigrants have come to Utah primarily for employment and have worked in large numbers in construction, landscaping, hospitality, and manufacturing. Immigrants also are concentrated in the highest-level scientific and technical occupations in the state, especially at our institutions of higher education. For example, about half the medical scientists in the

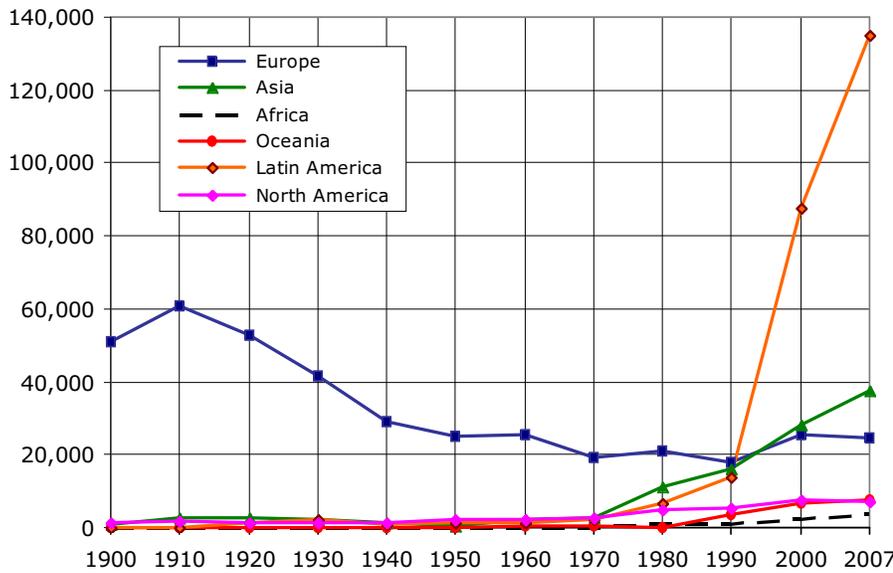
state are foreign born. Mario R. Capecchi of the University of Utah, who was awarded the Nobel Prize in Physiology or Medicine in 2007, was born in Italy. The current concentration of immigrants at the extremes of the occupational distribution is a continuation of the ability of the U.S. to attract the best and

<sup>13</sup> The U.S. Bureau of the Census generated post-censal estimates (and components of change) for the 1990s for Utah, but did not revise these when the 2000 Census results became available. In these estimates, net domestic migration to Utah was negative beginning in 1997 and continuing through 1999, while net international migration to Utah was estimated to be positive for the entire decade. See: "ST-99-7: State Population Estimates and Demographic Components of Population Change: Annual Time Series, April 1, 1990 to July 1, 1999," Internet release date: December 29, 1999.

<sup>14</sup> Note that the Utah Population Estimates Committee series does not distinguish between domestic and international net migration and its estimates differ from those of the Bureau of the Census.

<sup>15</sup> Audrey Singer (2008) "Twenty-First Century Gateways," pages 3–30 in *Twenty-First Century Gateways: Immigrant Incorporation in Suburban America*. Audrey Singer, Susan W. Hardwick, and Carolyn B. Brettell, eds. Washington, D.C.: The Brookings Institution.

**Figure 6**  
**Source Regions of Utah's Foreign-Born Population: 1900–2007**



Source: U.S. Bureau of the Census, Decennial Censuses and 2007 ACS.

globe, and has brought and expanded perhaps hundreds of cultures and ethnic groups.<sup>17</sup> One partial indicator of the number and range of these origins would be a count of the different languages spoken in Utah homes. The State Office of Education enumerated 117 languages other than English spoken in the homes of Utah students in 2007.<sup>18</sup>

### Utah's Racial and Ethnic Composition Is Changing

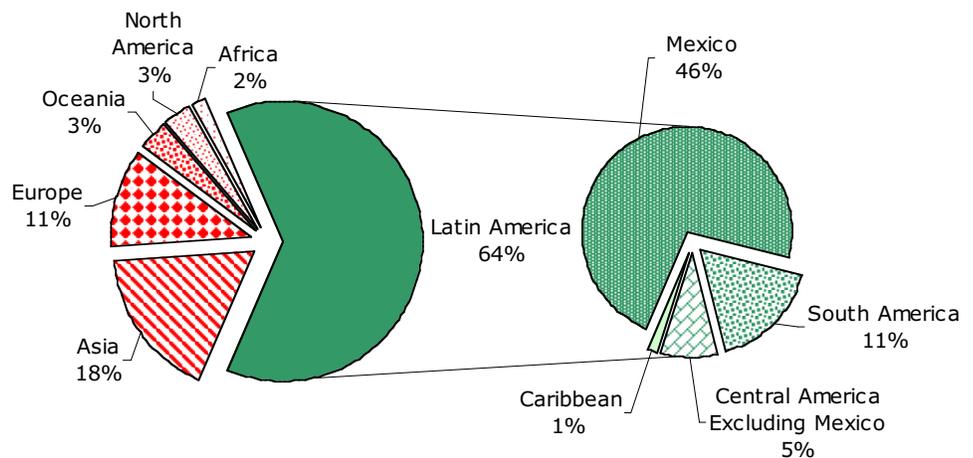
About three-quarters of the foreign-born population in Utah is classified by the federal government as a racial or ethnic minority, compared with only 10 percent of the native-born population. As previously explained, economic migrants (foreign and native born) are generally young adults in prime childbearing years. Some groups of recent migrants, notably Hispanics and

brightest in the world as well as those with ambitions to advance from the ranks of manual labor. As educational attainment of the native born has risen, demand for labor at the lower end of the occupational distribution has been met through immigration. Although economic opportunity has been the strongest draw for migrants, refugees have also settled in Utah, accounting for one-tenth of the increase in the state's foreign born in the 1990s. The global proselytizing efforts of the LDS Church, as well as the growth of universities and colleges, have drawn more immigrants to the state.<sup>16</sup>

During the immigration wave at the beginning of the twentieth century, most Utah foreign born originated in northern and western Europe. At mid-century, the restrictive quota system allowed a small number of mostly European immigrants to migrate to Utah, and during this period the post-WWII Baby Boom fueled national population growth. Over the past 30 years, forces external to Utah have greatly accelerated immigration flows to the state and have simultaneously shifted the origin regions from Europe to Latin America and Asia, although people have come from many other regions. The shifting origins of the Utah foreign born from 1900 to 2007 are shown in Figure 6, while Figure 7 shows the 2007 distribution in more detail. Utah's foreign-born population has arrived from across the

Pacific Islanders, have higher fertility rates than the native-born Utah population. The demographic contribution of in-migrants includes the original migrants, their offspring, and all future descendants who remain residents. The cumulative demographic impact on Utah (and the nation in general) is that the population is younger as well as more racially, ethnically, linguistically, culturally,

**Figure 7**  
**Source Regions of Utah's Foreign-Born Population: 2007**



Source: U.S. Bureau of the Census, 2007 ACS.

<sup>17</sup> Arriving at a definitive count of cultures and ethnic groups would be an extraordinarily complex endeavor. The concepts of culture and ethnicity are complicated and dynamic, and the associated population groups are as well. "Ethnic" is not equivalent to "foreign." Mormonism is an example of a "home grown" ethnic group. Extensive literatures in sociology and anthropology address these matters.

<sup>18</sup> Email from Edie Parks, State Office of Education, citing data from the USOE curriculum section, November 11, 2008. Note that a common language is not necessarily equivalent to the same ethnic group. This metric underrepresents the number of ethnicities and cultures in the population.

<sup>16</sup> Pamela S. Perlich (2006) "Immigration: Contributions to Utah Population Growth and Diversity," Chapter 17 in *Utah at the Beginning of the New Millennium: A Demographic Perspective*. Salt Lake City: University of Utah Press.

and religiously diverse than it would have been in the absence of these most recent immigrants. The minority share of the Utah population, which remained between 1 and 2 percent for many decades, is estimated to be 18 percent in 2007. Salt Lake County, which leads the state in convergence to national demographic trends, is approaching one-quarter (24 percent) minority share in 2007, while the nation has surpassed one-third (35 percent). Again, Utah remains less diverse than the nation, but it is, like the nation, trending towards more diversity.

Projections by the Bureau of the Census indicate that, holding these definitions of race and ethnicity constant, by 2050 the groups currently classified as “minorities” will collectively become the national majority.<sup>19</sup> If Utah does indeed continue to be a net in-migration region (as expected), the minority population should

the population early in the nation’s history is the effective exclusion of Native Americans from the enumerations and the “three-fifths” compromise in the count of slaves.<sup>20</sup> Hispanic Origin was added to the 1970 census as a separate ethnic category (distinct from race), and was defined as persons originating from a Spanish cultural region.

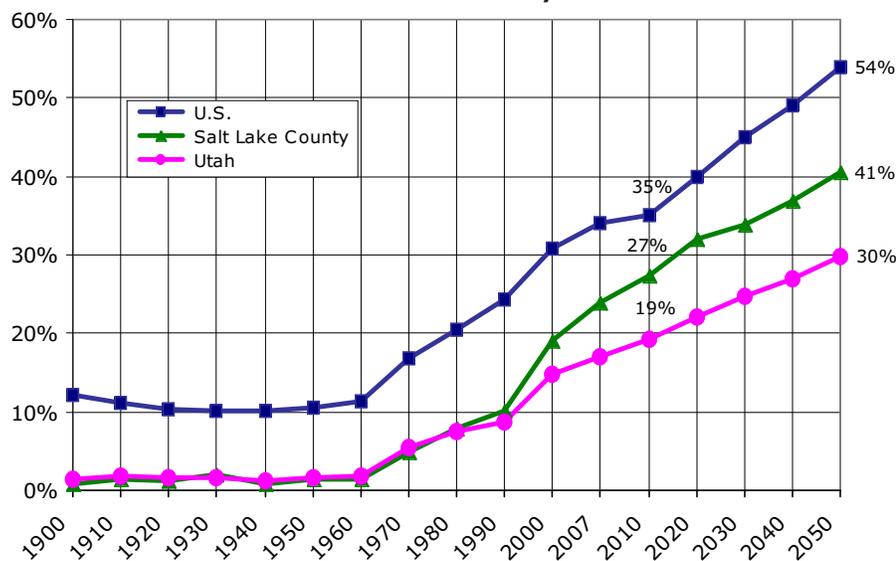
The definition of ethnicity is complex, fluid, and much debated. But the core concept is that of common values and culture, and in the case of immigrants, as noted above, language is often a marker. In 1980, before the current wave of immigration developed, the *Harvard Encyclopedia of American Ethnic Groups* was published and it identified 106 ethnic groups, including Mormons.<sup>21</sup> With the second great migration wave, the number of ethnic groups no doubt has increased. However, only two

ethnic groups are recognized by the federal government: Hispanic Origin and Not Hispanic Origin.<sup>22</sup> When Hispanics became visible in the national demographic data in 1970, the “minority” share of the population increased significantly, reflecting the long presence of these populations as well as the arrivals of more recent immigrants and the offspring of both.

The multi-race option was added in the 2000 census, allowing individuals to select as many races as they wish. The new definition of “minority” is again one of exclusion where all persons answering the race question as “White Alone” and also the ethnicity question as “Not Hispanic” are classified as “majority,” while all others are “minority.”<sup>23</sup> The five major race categories are White, Black, American Indian and Alaska Native, Asian, and Native Hawaiian and Pacific Islander. The other race options are “None of the Above” (officially called “Some Other Race”) or two or more of the above races (multi-race). A significant share of persons

answer “White Alone” for lack of any better label. For example, persons of Arab or Greek descent or first-generation immigrants from Bosnia and Serbia most often self-identify as “White Alone.” This means that the “White” majority in Utah today is much more

**Figure 8**  
Minority Shares of the Population: U.S., Utah, and Salt Lake County



Source: Bureau of Economic and Business Research, University of Utah analysis of U.S. Bureau of the Census, Decennial Censuses 2008 Vintage National Projections, and 2007 ACS; and Bureau of Economic and Business Research, University of Utah, Utah and Salt Lake County minority shares for 2010–2050.

approach one-third (30 percent), and Salt Lake County should reach 41 percent by 2050. The official race and ethnic categories have consistently evolved over time, a reflection of demographic, social, and political changes. By 2050, our current categories will be obsolete, so that the meaning of this projection exercise is that the future population will be much different from today (Figure 8).

The federal government has included race or color in national demographic data from the original census in 1790. Because these are social constructions, the categories and definitions have evolved, reflecting the incorporation of new populations as well as the ever-shifting political context. Only a subset of ethnic groups have been captured in this official accounting system, and this has resulted in the consistent portrayal of the population as being more culturally and ethnically monolithic than it is. The primary reasons why minorities appear to be such a small share of

<sup>19</sup> U.S. Bureau of the Census, Population Division (2008) *Projections of the Population and Components of Change for the United States: 2010 to 2050*.

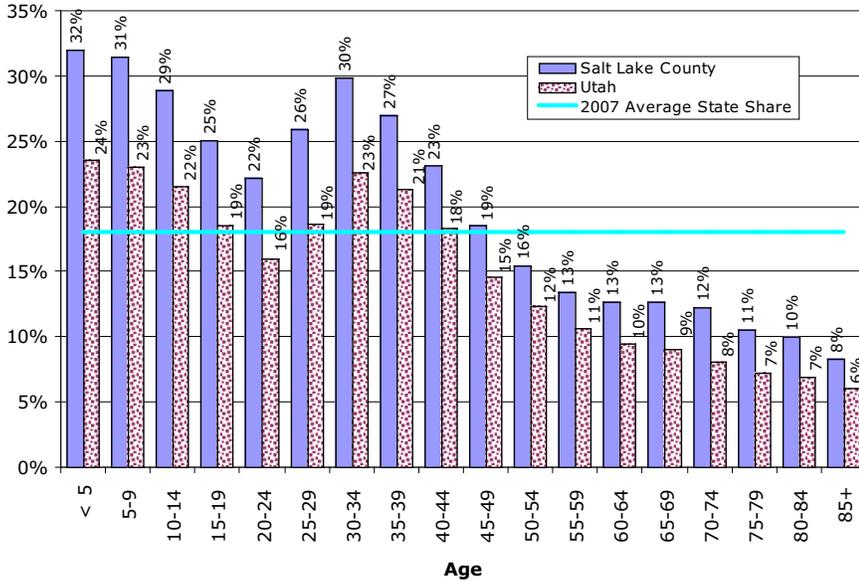
<sup>20</sup> The first serious attempt to include Native Americans was the 1920 census.

<sup>21</sup> Stephan Thernstrom, editor (1980) *Harvard Encyclopedia of American Ethnic Groups*. Cambridge: Harvard University Press.

<sup>22</sup> The 1997 revision of race and ethnicity categories changed this to Hispanic or Latino Origin (and Not Hispanic or Latino Origin). See: Office of Management and Budget, “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity,” *Notice*, Vol. 62, No. 210, Thursday, October 30, 1997. <http://www.whitehouse.gov/omb/fedreg/1997standards.html>

<sup>23</sup> Mathematically, the minority population is as follows: total population minus the population of those White alone and also not Hispanic. Minorities include those who report a race other than White alone and also those who are Hispanic.

**Figure 9**  
**Minority Shares of the Population by Age: Utah and Salt Lake County, 2007**



Source: Bureau of Economic and Business Research, University of Utah analysis of Bureau of the Census Population Estimates.

diverse than the stereotypic “White” majority composed of Hansens, Jensens, and Christensens and other Utahns in the 1950s.

This increase in ethnic and racial diversity is not uniformly distributed across the age spectrum. Rather, it represents a generational shift, as nearly one-fourth (24 percent) of preschool-age persons in Utah and one-third (32 percent) in Salt Lake County in 2007 were estimated to be racial or ethnic minorities. In contrast, less than 10 percent of retirement-age Utahns are estimated to be minorities. These age waves of diversity are also evident in school enrollment data. From 2000 through 2007, minorities accounted for one-third of the increase in the total population and two-thirds of the school enrollment increase in the state. Unless the elders in the community are associating with the youth, they could miss this wave of demographic change. There is also greater minority representation in the prime working-age population, many of whom are recent immigrants and who are the parents of the increasingly diverse student populations.<sup>24</sup> Minority share of the Utah population by age is shown in Figure 9, while minority contributions to Utah population and school enrollment growth are shown in Figure 10.

National projections show how this currently youthful diversity moves into older age groups over time. The minority share of those under 18 years old increases from 45 percent in 2010 to 62 percent in 2050. The working-age

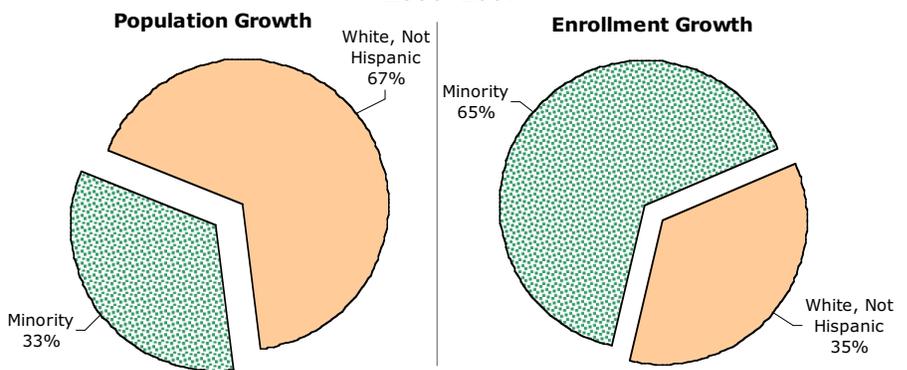
<sup>24</sup> Many of these recent prime working-age immigrants currently do not have the right to vote. But their native-born children will eventually have this right.

population increases from 35 percent minority in 2010 to 55 percent in 2050. The minority share of the population 65 years and older increases from 20 percent in 2010 to 42 percent in 2050. Similarly, Utah’s minority proportions will increase in older age groups as those who are currently youth move into their prime working years. The preschoolers of 2008 (those who are less than 5 years old) will reach working age beginning in 2021. This corresponds with the time when the growth rate of the retirement-age population in Utah significantly accelerates, as is discussed below. Projected minority shares of the U.S. population by age groups are displayed in Figure 11.

### Birth Patterns Create Age Waves

Differing patterns of births over time explain much of the current and projected age structure variations between nations and regions. The number and characteristics of in- and out-migrants across time will modify, but not erase, the underlying age waves created by these particular birth series. As shown in Figure 12, the national post-WWII Baby Boom, which peaked in 1957, lasted from 1946 through 1964 and generated an age wave that continues to dominate the nation’s age distribution. In 2008, the oldest U.S. Boomer is 62 years old, the age of those at the peak is 51, and the youngest is 44. The national echo boom (children of the U.S. Baby Boomers) began in 1977, peaked in 1990 (at a lower level than the original boom), and ended around

**Figure 10**  
**Minority Contribution to Utah Population and School Enrollment Growth: 2000–2007**



Source: Bureau of Economic and Business Research, University of Utah analysis of Utah State Office of Education data and Bureau of the Census estimates.

2000. By this definition, in 2008 the youngest echo boomer is 8, the peak is 18, and the oldest is 31. As immigrants began arriving in large numbers and having children, national births have begun rising again, overwhelming the reduction of births after the echo boom was complete. Annual births in 2006 were 4.27 million, exceeding all but the peak post-WWII Baby Boom years of 1957

through 1961.<sup>25</sup> This most recent escalation of births is the result of more people entering childbearing years (aging echo boomers and arriving immigrants) and increases in the fertility rate, often associated with first-generation immigrants.<sup>26</sup>

Births also peaked in Utah in the post-WWII era in 1962. But this peak was later greatly surpassed by its echo, which occurred in 1982. As previously noted, Utah experienced net out-migration for much of the 1960s and began a 14-year run of net in-migration beginning in 1970 and continuing through 1983. These periods of in- and out-migration changed the age composition of the state and altered its birth pattern as well. If we define Utah's echo boom as beginning in 1974, peaking in 1982 and ending in 1989, the youngest in 2008 is 19, the peak is 26, and the oldest is 34. The peak-birth-year individual (born 1982) went through public education (ages 5 through 17) from 1987 through 1999 and through college (ages 18 through 24) from 2000 through 2006.

This cohort has been generating the current echo boom, with record births for the past nine years. The resulting age wave is the current school-age population boom, expected to last the next ten years. Growth in Utah's school-age population has surpassed earlier projections because economic growth over the past decade exceeded expectations and brought more young adults, their children, and their new births to the state. As previously noted, many of these new Utah residents have come from outside the U.S.<sup>27</sup>

Utah's ever-higher echo booms are the combined result of being a net in-migration region and maintaining an above-replacement-level fertility rate. The favorable labor market creates a self-sustaining youth movement of sorts, and means that, at least in waves, each generation is numerically larger than the previous. Nationally, the long-term decline in fertility rates, especially since 1970, resulted in a smaller echo boom peak in 1990, as compared with the original Baby Boom peak in 1957, resulting in successively smaller generations. The coming of record numbers of immigrants to the U.S. beginning in the 1980s,

<sup>25</sup> National Center for Health Statistics (2007) *Births: Preliminary Data for 2006*. National Vital Statistics Report, Volume 56, Number 7.

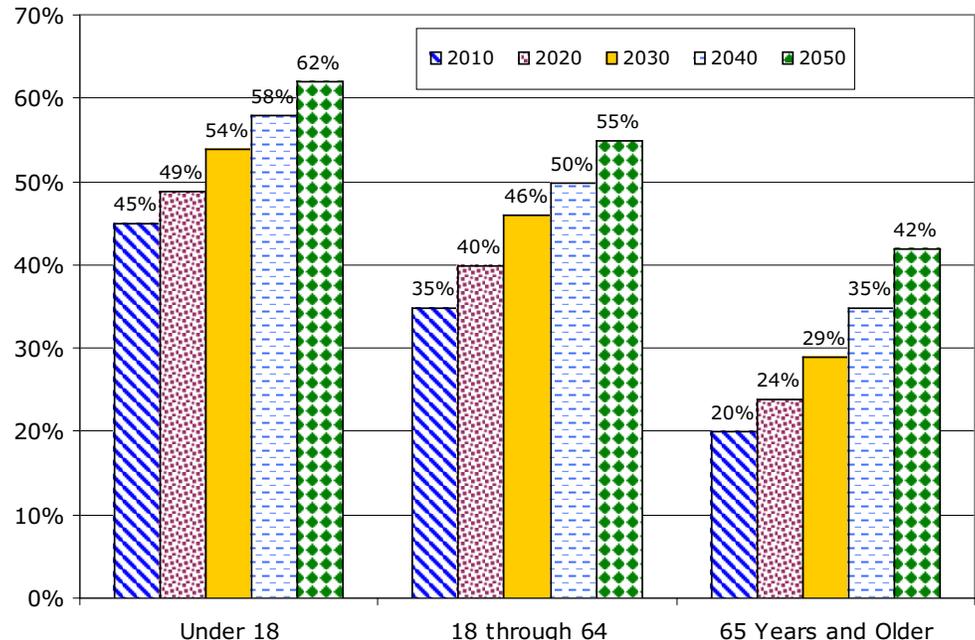
<sup>26</sup> Jorge Durand, Edwaard Telles, and Jennifer Flashman (2006) "The Demographic Foundations of the Latino Population," Chapter 3 in *Hispanics and the Future of America*. Washington, D.C.: National Academies Press.

<sup>27</sup> About one-third of the domestic net in-migrants to Utah from 1995 to 2000 were foreign born. See Marc J. Perry and Jason P. Schachter (2003) *Census 2000 Special Reports, Migration of the Natives and the Foreign-Born: 1995–2000*.

combined with a reversal of fertility rate declines, have combined to mitigate these structural demographic trends. As a result, the U.S. is currently creating a larger generation than we have experienced since the original Baby Boom. As the post-WWII Baby Boomers retire, this new youth wave will be responsible for supporting this largest-ever wave of retirees.

If the birth pattern is aged by 18 years, the "graduates" of youth become additions to the adult-age population. Age waves of 18-year-olds are important because they define the "pipeline" to college, missions, labor force, and household formation. Based on birth patterns alone, the number of 18-year-olds peaked in the U.S. in 1979, declined to a trough in 1991, then again peaked in 2008. In Utah, 18-year-olds peaked in 1980, declined to a low point in 1984, peaked again in 2000, declined until 2007, and will continue to increase at least through 2016.

**Figure 11**  
**U.S. Minority Share of the Population by Age Groups: 2010–2050**

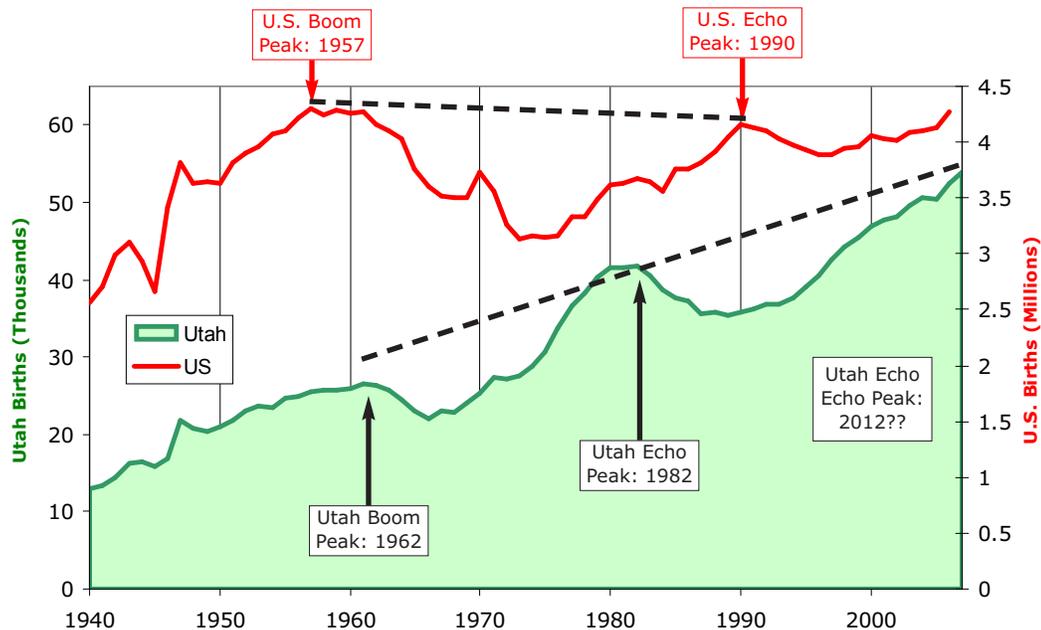


Source: U.S. Bureau of the Census, Population Division, Projections of the Population and Components of Change for the United States: 2010 to 2050, August 14, 2008.

### Utah's Age Structure Is Evolving

Utah has long had the largest number of children per capita among all states. And, while Utah maintains the highest fertility rate among all states, this rate has fallen significantly since 1960. As just explained, as long as employment opportunities attract young working-age persons (who are in childbearing years), this reinforces the young age structure of Utah, and creates a younger population nationally than would otherwise have been the case. Even if these trends continue, as is expected, the median age of both the Utah and national populations will continue to increase as the post-WWII Baby Boom age wave reaches retirement age and a greater share of the elderly live longer than previous generations. Retiring Baby Boomers will migrate to and from Utah, both for reasons of family reunification and amenity-based

**Figure 12**  
**Utah and U.S. Annual Births: 1940–2007**



Source: Bureau of Economic and Business Research, University of Utah analysis of National Center for Health Statistics and Utah Population Estimates Committee data.

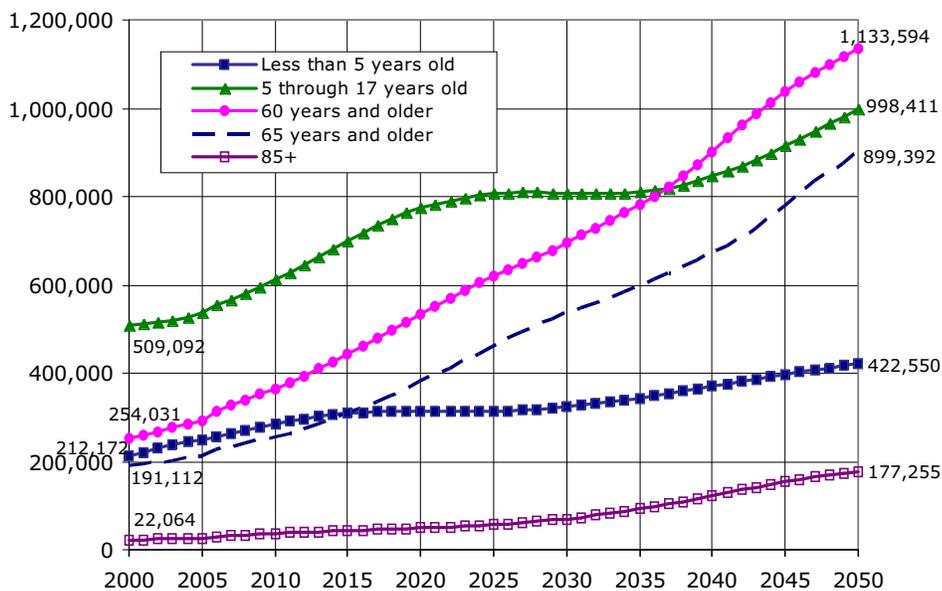
elderly population (60 and older), retirement age (65 years and older), and the extreme elderly (85 years and older). The population in all of these age groups, and of the working-age population as well, is projected to increase, although the rate of increase of the older age groups is most rapid. The 60-and-older population is expected to exceed the school-age population by 2037 in Utah as a whole and about ten years earlier in Salt Lake County. Nationally, this is estimated to have already occurred in 2008. The very elderly population in Utah is expected to increase eight-fold to nearly 180,000 by 2050. The growth of these age groups will vary

location. If more move to than from the state, this will contribute to the growth of the retirement-age population.

depending on rates of economic growth and migration patterns of retiring Baby Boomers, among other factors.

The age waves created by Utah's birth patterns combine with the age distribution of in- and out-migrants as well as differential mortality rates across age groups and birth cohorts to shape the state's future age distribution. Cohort-component population projection models compute the compositional changes resulting from these projected demographic trends. The REMI model is a structural equation projection model incorporating, among others, economic base and cohort-component models. The Bureau of Economic and Business Research generated a series of demographic and economic projections for Utah using the REMI model and targeting a base case population of 5 million in 2050. Partial age structure results for the base case are shown in Figures 13 and 14.

**Figure 13**  
**Selected Age Group Projections for State of Utah: School Age, 60 and Over, and 65 and Older**



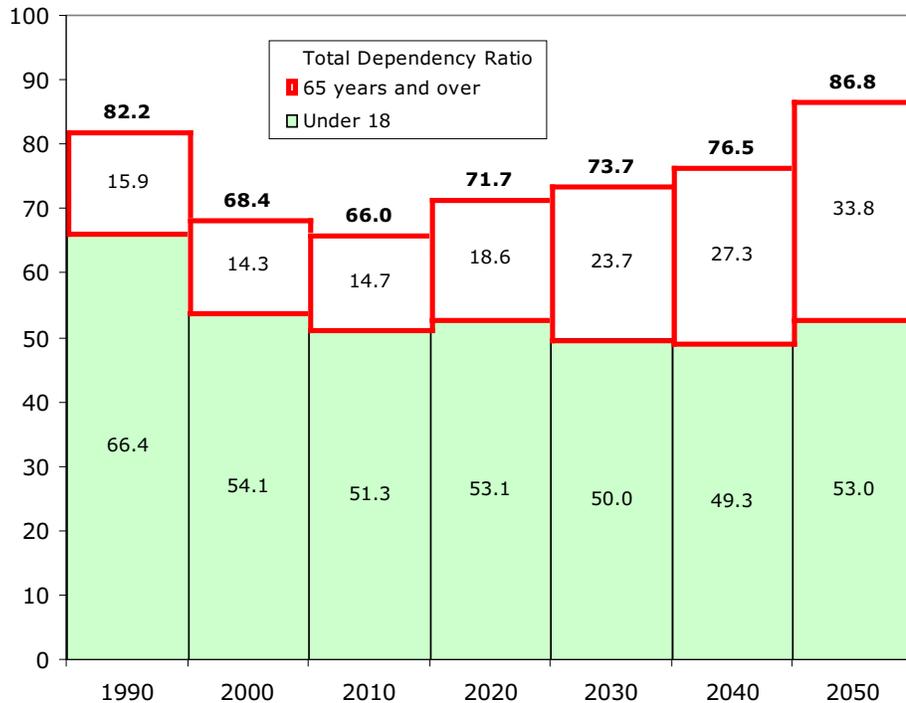
Source: Bureau of Economic and Business Research, University of Utah, 2008 Projection Scenarios for Utah, 5 million population in 2050 baseline, September 2008.

Figure 13 shows the non-working-age population age groups that are generally tracked by demographers.<sup>28</sup> These include preschool age (less than 5 years old), the school-age population (5 through 17 years old), the

Another measure of age structure is the dependency ratio, which relates the size of the working-age population to that of the non-working-age population. Specifically, the dependency ratio is the number of non-working-age persons (i.e., those younger than 18 and those 65 years and older) per 100 persons of working age (i.e., those who are 18 through 64 years old). In 2000, there were 68.4 non-working-age persons per 100 persons of working age in

<sup>28</sup> The age group 60 to 65 is part of the working-age population. However, the 60 years and older population is shown here because it defines eligibility for certain government programs.

**Figure 14**  
**State of Utah Dependency Ratios: 1990–2050**



Source: Bureau of Economic and Business Research, University of Utah, 2008 Projection Scenarios for Utah, 5 million population in 2050 baseline, September 2008. Note: Components may not sum to total due to rounding.

Utah. There were 54.1 persons less than 18 and 14.3 persons 65 and older per 100 persons in the 18-through-64-year-old age group. Assuming a constant fertility rate and continued economic growth, Utah can expect about the same number of children per working-age person, but a dramatic increase in the ratio of persons in the retirement-age group. If these trends continue, there will be 53.0 persons less than 18 years old and 33.8 persons 65 years and older per 100 working-age persons in Utah by 2050. This combined dependency ratio of 86.8 exceeds the 76.4 dependency ratio projected for the U.S. Dependency ratios for Utah are shown in Figure 14, while those for the U.S. are shown in Figure 15. Importantly, the working-age population declines from 60 percent of the Utah population in 2010 to 53 percent in 2050. This compares with national shares of 63 percent and 57 percent, respectively.

Figure 16 presents the relative (percentage) population distribution by five-year age groups and sex for Utah for 1900 and as projected for 2050. Each graph is presented in percentage terms with the same scaling for an “apples-to-apples” comparison. The bars on the left of each pyramid represent the percent of males in each five-year age group, while those on the right correspond to females. The 1900

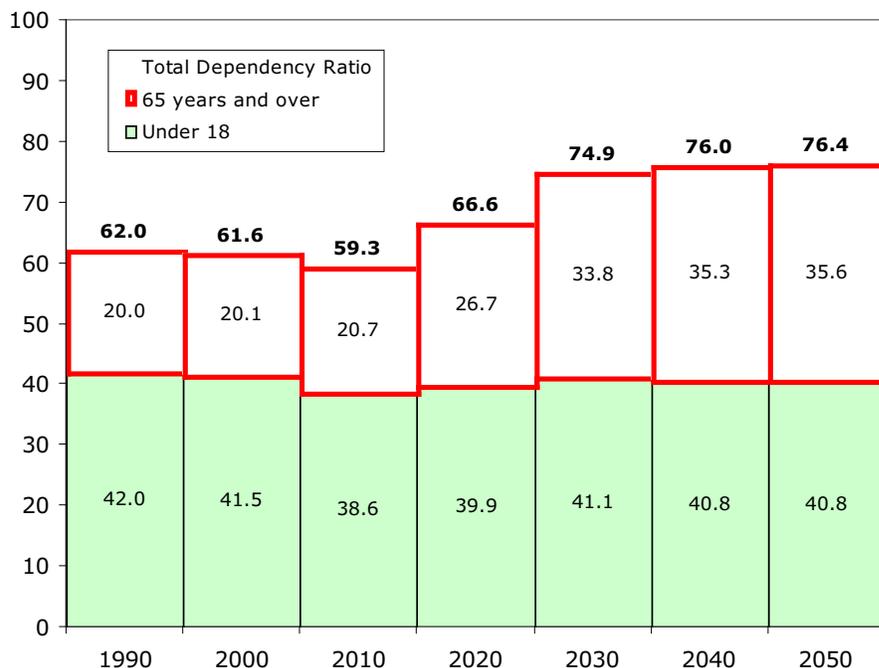
pyramid is quite triangular with a broad base and pointed top. This indicates many children per capita (high fertility) and few elders (short life expectancy). The 2050 pyramid is much more rectangular (more even age distribution), except the long bars on the top. This is a population with a much lower fertility rate than the 1900 population and a larger population of elders (much higher survival rate and life expectancy). This represents a near inversion of the 1900 population pyramid.

### Becoming the New Utah—Intergenerational Challenges

Utah is in the midst of an unprecedented economic, demographic, and cultural transformation that has its origins in national and international trends. As the state has developed a larger and more diversified economy, it has become more fully integrated into global financial, production, and labor markets. Within the past 30 years and continuing into the new century, Utah has emerged as a destination for those seeking employment

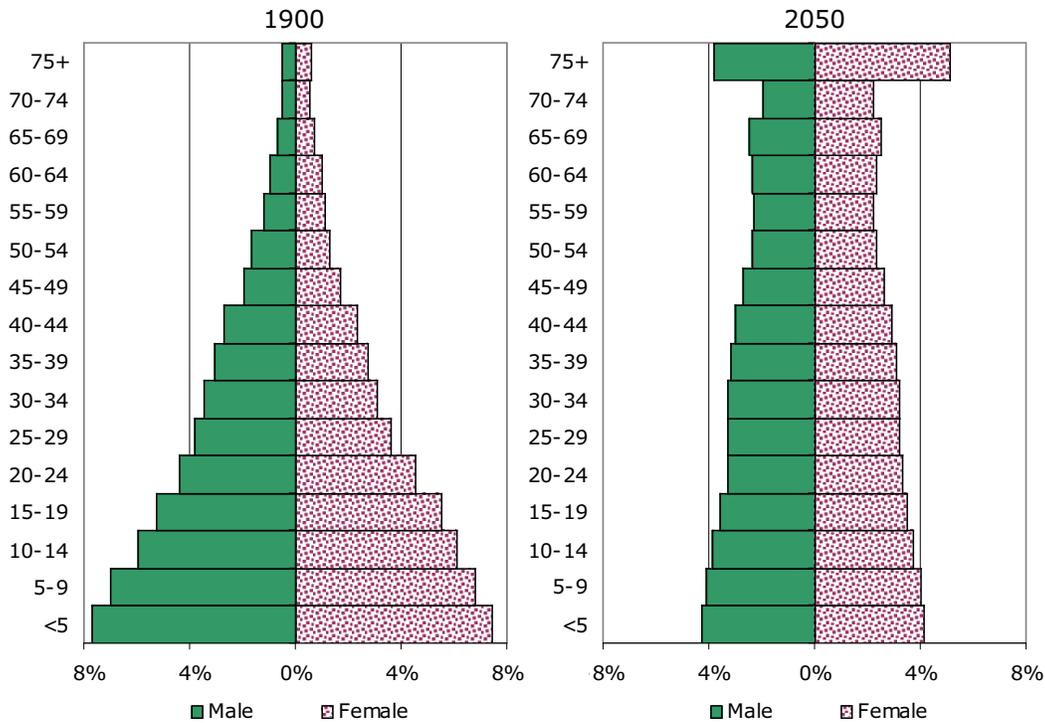
opportunity (both native and foreign born) and increasingly for retiring Baby Boomers. Meanwhile, life expectancy continues to increase. The net result of these trends is that Utah, along with the rest of the nation, is becoming much more culturally,

**Figure 15**  
**U.S. Dependency Ratios: 1990–2050**



Source: U.S. Bureau of the Census, Population Division, Projections of the Population and Components of Change for the United States: 2010 to 2050, August 14, 2008.

**Figure 16**  
**Utah Age and Sex Distributions: 1900 and 2050**



Source: U.S. Bureau of the Census, *1900 Census of the Population*; Bureau of Economic and Business Research, University of Utah, 2008 Projection Scenarios for Utah, 5 million population in 2050 baseline, September 2008.

linguistically, ethnically, and racially diverse as well as having a rapidly growing older population. These trends mean that the age structure and ethnic composition of the future population will be significantly different than that of the past.

From 2005 to 2050, immigrants and their children and grandchildren will account for 80 percent of national population growth.<sup>29</sup> Of course, we are a nation of immigrants, and all but native populations have immigrated. Depending upon regional differences in economic growth and structural economic changes, as well as internal migration patterns, this contribution in Utah will range from 40 to 60 percent by 2050. Similarly, by 2050, the “minority” share of the U.S. population is projected to reach 54 percent, although the minority share among youth (under 18) is projected to reach 62 percent. Meanwhile, in Utah, the minority share of the population will reach at least 30 percent, and higher if the state generates even more economic opportunity than expected.

Over the next several decades, Utah’s working-age population will be asked to continue supporting the largest number of youth per capita of any state. In addition, they will be asked to support an increasing share of retirees in the population. Once they reach adulthood, the youth of today will carry a much greater demographic burden than their parents’ generation. And these workers and caretakers of tomorrow are currently at the forefront of this increasing wave of ethnic, cultural, and linguistic diversity. These structural demographic changes are occurring within the context of increasing global competition, continued economic

globalization, and the realization of resource and environmental constraints. Adults finance the education of our youth. This intergenerational transfer is an investment in individuals as well as in the future of the community. Eventually these same youth will join the workforce and will contribute to Social Security, Medicare, and other transfers to elders. This too is an intergenerational transfer, and can be viewed as a repayment to the retirees, who had earlier financed their education.<sup>30</sup>

The extraordinary demographic transformation that is unfolding around us presents significant challenges to the policy makers of today. One thing is clear: planning for the future cannot be based on an obsolete view that the future population is simply a super-sized version of an idealized past. How do we restructure our institutions and communities to not only accommodate but benefit from these changes? How do we reengineer our infrastructure and housing to create a physical environment that is livable, sustainable, affordable, and efficient? How do we prepare the youth of today to be the most productive and creative generation ever? In short, how do we redesign policies and plans to ensure the best possible future for this New Utah? These are the great challenges that we face.

BEER

<sup>29</sup> Jeffrey S. Passel and D’Vera Cohn (2008) *U.S. Population Projections: 2005–2050*, Pew Hispanic Center.

<sup>30</sup> See Dowell Myers (2007) *Immigrants and Boomers: Forging a New Social Contract for the Future of America*. New York: Russell Sage Foundation.

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