THE AGING US WORKFORCE
A Chartbook of Demographic Shifts
July 2013

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The Stanford Center on Longevity
INTRODUCTION

By 2020, older workers age 55+ will account for 25% of the U.S. labor force, up from just 13% in 2000. This shift reflects two trends: the overall population is aging and more and more older people are working longer. The Bureau of Labor Statistics projects that by 2020, 28% of women age 65-74 will be working, up from 15% in 2000, and 35% of men age 65-74 will be working, up from 25% in 2000.

Our report examines these and other demographic trends and explains what these challenges mean for employers, workers, and policy makers. The goal in producing this compendium of charts was to provide a big picture framework for understanding the labor force challenges and opportunities that are emerging from ongoing demographic shifts. Where possible we have provided historical context for understanding how key variables have evolved, and we have provided a comparative perspective for understanding how different age groups and industries are changing.

The report highlights seven key issues that have important implications for adapting to an aging workforce:

- population age shifts
- labor force shifts
- industry and occupation age structures
- issues and implications related to job tenure and employment
- age-related work preferences
- compensation
- job types

The Stanford Center on Longevity intends this report to be the first in a series of reports on financial security challenges facing the United States. It is also a companion piece to the 2010 Stanford Center on Longevity report, “New Realities of an Older America.”

In April 2013, the Stanford Center on Longevity convened a group of employers, researchers, and policy experts to discuss strategies for “Adapting to an Aging Workforce.” We circulated a working draft of the report as background reading and to set the stage for the discussion. This expanded and revised version addresses questions and suggestions from the conference attendees.

We wish to thank Marsh & McLennan Companies for supporting this work, and we thank Martha Deevy, director of the Center’s Financial Security Division, for outlining the need for this project and for her encouragement and suggestions along the way.
Three key dimensions characterize the coming population shifts in the United States: continued growth, increased diversity, and aging of the population.

**Growth:** The U.S. population is projected to grow by 91 million over the next 40 years, from 309 million in 2010 to 400 million in 2050. Growth will occur in all age brackets, but most of the growth will be concentrated in the higher ages. The number of people age 65+ will more than double, increasing from 13% of total population in 2010 to 21% of total in 2050.

While the working-age population, age 20-64, will continue to increase, growth in this segment will be much slower than when it was fueled by the baby boomer bulge. This population segment will shrink as a share of total population, from 60% in 2010 to 55% in 2050.

The population under age 18 will continue to increase, driven by an increase in total number of births, even while number of births per woman declines. The total number of U.S. births is projected to average 4.6 million per year from 2015 to 2060, well above the baby boom peak of 4.3 million births in 1957.

**Diversity:** The population will be increasingly diverse. Over the next 40 years, the white population will decline by about 10% while the Hispanic population will more than double. By 2043, the nation will be majority-minority; by 2050, Hispanics will account for 28% of total population, compared with 47% for non-Hispanic whites.

**Aging:** The short-term population age shift is especially significant for employers as the baby boomers age. Segmenting the conventional working-age population into two parts—20-44 and 45-64—shows the impact of the baby boomers on labor force composition and points to some of the challenges faced by employers. Each age bracket swells for a 20-year period as the boomers enter. Then, as the boomers move out of that age range, the bracket size stabilizes until children of the baby boomers, known as echo boomers, enter that bracket.

Specifically, the population of mature workers, age 45-64, has grown rapidly over the last 20 years, but will stabilize over the next 10 years and will begin increasing only when the echo boomers begin to turn 45 in 2030. The young working-age population, age 20-44, is projected to steadily increase, due to the sustained number of projected births. In contrast, the senior working-age population, age 65+, will expand rapidly.

As employers seek to fill new positions or replace existing workers, they will face the boom and bust labor cycle and will need to consider how the age mix of the labor pool has changed. They may need to consider hiring either younger workers or senior workers as the pool of mature workers stabilizes or shrinks. Recruiting and training less-experienced younger workers may be an option when older workers leave the workforce. Similarly, retention and possibly retraining of mature workers may become increasingly attractive.

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The change in age structure from pyramid to cube reflects aging of the population.

Total population by age and sex, millions

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>20-64</th>
<th>% 20-64</th>
<th>% 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>151 million</td>
<td>87 million</td>
<td>58%</td>
<td>8%</td>
</tr>
<tr>
<td>2010</td>
<td>309 million</td>
<td>185 million</td>
<td>60%</td>
<td>13%</td>
</tr>
<tr>
<td>2050</td>
<td>400 million</td>
<td>221 million</td>
<td>55%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Note: Population by five-year age bracket; males on left, females on right. Analysis: Stanford Center on Longevity. Source: U.S. Census Bureau.

Older brackets account for two-thirds of projected population gain in the next 20 years.

Change in population, by age, millions, 2010-30

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>25.2 million</td>
</tr>
<tr>
<td>2020</td>
<td>24.6 million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2010-20</th>
<th>2020-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>65+</td>
<td>+15.7 million</td>
<td>+16.8 million</td>
</tr>
<tr>
<td>45-64</td>
<td>+1.8</td>
<td>-2.4</td>
</tr>
<tr>
<td>20-44</td>
<td>+6.4</td>
<td>+5.7</td>
</tr>
<tr>
<td>&lt; 20</td>
<td>+1.3</td>
<td>+4.5</td>
</tr>
</tbody>
</table>

Over the next 20 years, there will be no growth in the age 45-64 segment of the population.

![Graph showing working-age population, 1950-2060.](image)

Note: Conventional working age = 20-64.
Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau.

The Hispanic population will more than double over the next 50 years; by 2043, the nation will be majority-minority.

![Graph showing population by race and ethnicity, 2015-2060.](image)

Note: NH = non-Hispanic; Other NH = non-Hispanic and two or more races, American Indian & Alaskan Native, or Native Hawaiian and Pacific Islander.
Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau.
LABOR FORCE SHIFTS

**Composition of the labor force:** The composition of the labor force has shifted dramatically since the late 1990s, and even more dramatic shifts are expected. The participation of women and minorities has increased, there has been an influx of foreign-born workers, and the number and share of older workers has been increasing. The labor force will continue to become more diverse in age, ethnicity, and nativity.

**Labor force participation:** In contrast to declining overall labor force participation, labor force participation among the older population has been steadily increasing since 2000 for both men and women.¹ The current 14% participation rate for women age 65+ is the highest it has ever been and is projected to increase to 19% by 2020. The Bureau of Labor Statistics projects that the rate will reach 28% for women age 65-74 and 8% for women age 75+. For men age 65+, the current rate of 22% is projected to increase to 27% by 2020, a return to the level registered in 1970. According to Bureau of Labor Statistics projections, 35% of men age 65-74 will be in the labor force along with 13% of men age 75+.

By 2020, workers age 55 and older will account for 25% of the labor force. This share has been steadily increasing since 1990 when workers age 55+ accounted for only 12%. The share of older workers had been as high as 18% in the 1960s and 1970s before baby boomers surged into the labor force.

Although labor force participation has increased among the population age 65+, there may be even further room to expand their labor force participation. While work disabilities still constrain 20% of people age 65+, an increasing number of older people are not constrained by disability and could enter the labor force. According to the Census Bureau, of the non-working population age 55-74 in 2008, approximately 16 million, or 62% of the total, were healthy enough to work. Employers who recognize and recruit this potential source of labor may have a competitive advantage.

**Education and performance:** Educational attainment is another consideration in recruiting and replacing existing older workers, especially as younger generations become better educated. There are currently more college graduates under age 50 than over age 50, and there are about an equal number of graduate degree holders under 50 as over 50.²

It is also true that today’s 65-year-olds are better educated than the 65-year-olds of the past. Of the population that was 65+ in 2000—those born before 1935—only 15% had a college degree or higher. In contrast, of those who were 65+ in 2012—those born before 1947—25% had a college degree or higher. Thus, it may be more desirable and economically effective to retain today’s older workers than it has been in the past. Moreover, survey results suggest that most employers think older workers are more productive than younger workers.³

These education and performance statistics point to the importance of recruiting and retaining well-educated experienced older workers as a complement to recruiting and training well-educated younger workers.

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³ Center for Retirement Research, “Employer Attitudes towards Older Worker: Survey Results” (2006).
Labor force participation for the 65+ population has been rising since 2000. For men, this increase follows years of decline.

![Chart showing labor force participation rates for men, women, and total population aged 65+ from 1950 to 2020.](chart1)

More people are working longer: 35% of men and 28% of women age 65-74 are projected to be working in 2020.

![Chart showing labor force participation rates by age and sex from 1990 to 2020.](chart2)
Each age bracket swells as the boomers enter.

By 2020, 25% of the labor force will be age 55+, up from 12% in 1990.
Increased labor force participation at older ages could boost labor supply and help reduce financial burdens.

Labor force (blue) and population by five-year age bracket, millions

2010

- Total Population: 309 million
- Labor Force: 154 million

2020

- Total Population: 334 million
- Labor Force: 164 million

Note: Population in millions by five-year age brackets; males on left, females on right.
Analysis: Stanford Center on Longevity.
Source: SCL calculations using BLS and U.S. Census Bureau.

Of the non-working population age 65-74 in 2008, 11 million (73%) were healthy enough to work.

Work and disability status, by 10-year age bracket, millions, 2008

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Working</th>
<th>Not working</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No disability</td>
<td>w/ disability</td>
</tr>
<tr>
<td>65-74</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>55-64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Males on left, females on right; work disability = condition that limits capacity to work.
Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau.
Younger age groups are better educated than the population age 65+.

Educational attainment of the population, by age, 2012

Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau.

65-year-olds today are more educated than they used to be.

Educational attainment of the 65+ population, 2000 and 2012

Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau.
**LABOR FORCE SHIFTS**

**35% of Hispanic adults have not completed high school.**

Educational attainment of adults age 25+, by race and ethnicity, 2012

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Grad degree</th>
<th>BA</th>
<th>Some college</th>
<th>High Sch Grad</th>
<th>&lt; High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH White</td>
<td>13%</td>
<td>8%</td>
<td>20%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>22%</td>
<td>14%</td>
<td>30%</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>Asian</td>
<td>27%</td>
<td>30%</td>
<td>17%</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>31%</td>
<td>34%</td>
<td>21%</td>
<td>35%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Note: NH = Non-Hispanic; Hispanic includes all races
Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau.

**Most employers think workers 55+ are more productive than younger workers.**

Employer evaluations of workers 55+ compared to younger workers, by type of worker, 2006

<table>
<thead>
<tr>
<th>Worker Type</th>
<th>Less Productive</th>
<th>More Productive</th>
</tr>
</thead>
<tbody>
<tr>
<td>White collar</td>
<td>6%</td>
<td>56%</td>
</tr>
<tr>
<td>Rank and file</td>
<td>19%</td>
<td>41%</td>
</tr>
</tbody>
</table>

Note: Results from a survey of 400 private sector employers.
Reproduced by: Stanford Center on Longevity.
Source: CRR.
INDUSTRY AND OCCUPATION

**Industry:** In 2011, 29 million older workers age 55+ accounted for 21% of all 140 million jobs in the United States. Age mix varies across industry sectors, but is generally proportional to age mix of total employment, with a few exceptions. One sector with a disproportionately large share of older workers is educational services where workers age 55+ hold 25% of the jobs, compared with 21% for all industries combined. Among the medium-size industry sectors, a disproportionately large share of older workers (55+) is employed in transportation and warehousing (24%), other services (24%), and public administration (23%).¹

The industries with large shares of older workers—including agriculture, real estate, and educational services—face the potential risk of a significant number of employees leaving the workforce over the next few years as baby boomers reach the traditional retirement age. Because there is little expected population growth in the 45-64 age bracket, employers may need to target other age brackets, both older and younger, for replacement workers. This could result in an even higher share of older workers in those sectors as well as an increased need to train younger workers.

**Employment outlook:** The employment outlook for these industries is mixed. The Bureau of Labor Statistics projects a total job gain of 20 million from 2010 to 2020. More than half of these jobs are projected to be in health care, and professional and business services, both of which are currently large employers of older workers. This could offer positive job prospects for older workers, but might also result in even larger shares of older workers in these industries.²

**Manufacturing:** In the manufacturing sector, which lost nearly six million jobs from 2000 to 2010, recruiting challenges stem from technological advances that have changed the nature of the work. No net job growth is projected, but a survey of manufacturing executives reveals concerns about the future availability of qualified workers, especially skilled production workers, engineering technologists, and science and design workers.³ Older workers currently account for 20% of this sector but may not have suitable skills. This may present an opportunity for current older workers to be retrained or for others to develop the technical expertise now needed in this sector.

**Occupations:** Among the 29 million employees age 55+, 42% have management and professional jobs, and 24% have sales and office jobs. Another 14% have service jobs, including such jobs as health care support, protective service jobs, food preparation, and related occupations.⁴

The Bureau of Labor Statistics projects that service jobs will account for a quarter of all replacement needs. This occupational category does not currently have a large share of older workers so employers seeking to fill these job functions may need to look to other age groups as well as recruit older workers.⁵

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The four largest industries—health care, retail, manufacturing, and education—employ 44% of all workers and 46% of workers age 55+.

Employed persons by industry and age, millions, 2011

Analysis: Stanford Center on Longevity.
Source: BLS.
The industries with the highest shares of workers 55+ are agriculture, real estate, and education. Workers 55+ make up at least 25% of employment in these industries.

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of industry employment in each age bracket, sorted by ascending share of workers 55+, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>16-19</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>20-24</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>25-34</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>35-44</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>45-54</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>55-64</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>65+</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
<tr>
<td><strong>Total, all industries</strong></td>
<td><img src="chart_image" alt="Bar chart showing age distribution" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>Employment (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation &amp; food services</td>
<td>10</td>
</tr>
<tr>
<td>Construction</td>
<td>9</td>
</tr>
<tr>
<td>Mgm't, admin, waste</td>
<td>6</td>
</tr>
<tr>
<td>Information</td>
<td>3</td>
</tr>
<tr>
<td>Mining &amp; quarrying</td>
<td>1</td>
</tr>
<tr>
<td>Retail trade</td>
<td>16</td>
</tr>
<tr>
<td>Finance &amp; insurance</td>
<td>6</td>
</tr>
<tr>
<td>Arts &amp; entertainment</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>4</td>
</tr>
<tr>
<td>Professional &amp; technical services</td>
<td>10</td>
</tr>
<tr>
<td>Health care &amp; social assistance</td>
<td>19</td>
</tr>
<tr>
<td>Utilities</td>
<td>1</td>
</tr>
<tr>
<td>Public admin</td>
<td>7</td>
</tr>
<tr>
<td>Transportation &amp; warehousing</td>
<td>6</td>
</tr>
<tr>
<td>Other services</td>
<td>7</td>
</tr>
<tr>
<td>Educational services</td>
<td>13</td>
</tr>
<tr>
<td>Real estate</td>
<td>3</td>
</tr>
<tr>
<td>Ag, forestry, fishing, hunting</td>
<td>2</td>
</tr>
</tbody>
</table>

Analysis: Stanford Center on Longevity.
Source: BLS.
Of the 29 million workers age 55+, 12 million (42%) are in management jobs, and 7 million (24%) are in sales.

Employed persons by major occupation and age, millions, 2011

Note: See selected definitions for examples of each major occupation. Analysis: Stanford Center on Longevity. Source: BLS.

Service jobs account for almost one quarter of anticipated job replacement needs.

Replacement needs, projected 2010-20, millions

Note: Service jobs include healthcare support occupations, protective service workers, food preparation and related occupations, cleaning and maintenance occupations, and personal care occupations. Analysis: Stanford Center on Longevity. Source: BLS.
Manufacturing executives expect the “shortage of workers” in skilled production to increase over the next 3-5 years.

Assessment of anticipated availability of qualified workers, next 3-5 years

<table>
<thead>
<tr>
<th>Industry/Occupation</th>
<th>% of surveyed executives expecting:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No change</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
</tr>
<tr>
<td>Skilled production</td>
<td></td>
</tr>
<tr>
<td>Engineering technologists</td>
<td></td>
</tr>
<tr>
<td>Science &amp; product design</td>
<td></td>
</tr>
<tr>
<td>Unskilled production</td>
<td></td>
</tr>
<tr>
<td>Sales &amp; marketing</td>
<td></td>
</tr>
<tr>
<td>HR, IT, Finance</td>
<td></td>
</tr>
<tr>
<td>Customer service</td>
<td></td>
</tr>
</tbody>
</table>

Note: Results from a survey of a nationally representative sample of 1,123 manufacturing executives across fifty states.
Reproduced by: Stanford Center on Longevity.
Source: Deloitte and The Manufacturing Institute.
JOB TENURE AND UNEMPLOYMENT

**Job tenure:** After a dip in the late 1990s, job tenure for all workers 25+ has risen to 5.4 years. Although men historically have had longer job tenure than women, this gap has begun to close among all age groups, including senior workers. Job tenure for male workers age 55-64 currently stands at 10.7 years, compared with just 10.0 years for female workers age 55-64. While this represents peak tenure for women, men age 55-64 experienced peak tenure in 1983 when job tenure was 15.3 years.¹ There is still great variability in job tenure among aging workers: 30% of workers 55+ have been in their current job for more than 20 years, but almost 10% have been in their job for less than a year.²

Job tenure also differs by job type and industry. Public sector workers have longer job tenure (7.8 years) than private sector workers (4.2 years). Among private sector workers, manufacturing workers have the longest job tenure at 6 years.³

**Unemployment:** During the recent recession, men of all ages faced higher unemployment than women.⁴ Older workers have the lowest unemployment rate among all age groups but the duration of their unemployment is longer. In 2012, workers 65+ had an unemployment rate of 6.2% compared to 8.3% for workers 25-34. Of the 13 million unemployed, 2 million (or 15%) were 55+.⁵ As of February 2013, unemployed workers 55-64 had been unemployed for an average of 46 weeks and workers 65+ for an average of 42 weeks, compared to an average of 33 weeks for workers 25-34.⁶

**Recruiting:** Employers interested in hiring new workers should not discount workers 55+ because of the misperception that they are “too old” to begin a new job and “too old” to stay in a new job. In fact, many workers are starting new jobs at older ages, expanding the pool of talent for employers to consider. Half of workers 65+ started their current job in the past 11 years and 10% of all workers 55+ have started a new job in the past year.

Due to the dearth of 45-64 year olds, employers might look at unemployed older workers as a potential untapped resource. Given the long duration of their unemployment, they may be more willing to accept contract, part-time, or otherwise flexible positions.

**Transition:** Employed older workers are likely to be reluctant to leave their jobs in part due to financial reasons and in part due to how difficult it is for unemployed workers 55+ to find a new job. As a result, employers might think about creating more flexible work exit options that allow employees to transition out of the workplace gradually while maintaining some of their benefits and continuing to contribute to the company.

---

Median years of job tenure are on the rise after a dip in the late 1990s.

Median years of tenure for wage and salary workers, age 25+, 1983-2012

- **Men**
- **Total**
- **Women**

Note: Tenure = number of years at current employer.
Reproduced by: Stanford Center on Longevity.
Source: EBRI.

Of the 13 million unemployed, 2 million, or 15%, are 55+.

Unemployment by age, millions, 2012

- **16-19**: 1.4
- **20-24**: 2.1
- **25-34**: 2.8
- **35-44**: 2.2
- **45-54**: 2.2
- **55-64**: 1.5
- **65+**: 0.5

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-19</td>
<td>24.0%</td>
</tr>
<tr>
<td>20-24</td>
<td>13.3%</td>
</tr>
<tr>
<td>25-34</td>
<td>8.3%</td>
</tr>
<tr>
<td>35-44</td>
<td>6.6%</td>
</tr>
<tr>
<td>45-54</td>
<td>6.2%</td>
</tr>
<tr>
<td>55-64</td>
<td>5.9%</td>
</tr>
<tr>
<td>65+</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Analysis: Stanford Center on Longevity.
Source: BLS.
AGE-RELATED PREFERENCES

**Alternative work arrangements:** Workers 50 and over are more interested in flextime than any other alternative work arrangement. Of workers 50 and over, 35% describe flextime as “very important,” compared to 23% who describe telecommuting as “very important” and 17% who deem job sharing “very important.” These relative rankings are similar at all ages.

**Reason for working:** Most (78%) workers age 50 and over are in the labor force for “financial reasons, such as the need for money or health insurance.” Only 19% report that they are working primarily for “non-financial reasons such as enjoyment or the desire to be productive.” However, non-financial motivation to stay in the workforce increases with age, with 41% of those 70 and over citing non-financial reasons as their primary purpose for working.\(^1\)

**Eldercare:** In 2011, more than one quarter of women age 45-64 provided “eldercare,” defined as unpaid care to someone over 65 who needed help due to an aging-related condition.\(^2\) This statistic may explain some of the interest in flextime among older workers.

**Implications:** Employers interested in retaining or attracting workers 50+ might consider that the majority of these workers are in the labor force for financial reasons. This highlights the importance of offering competitive pay and benefits packages.

Employers who are unable to compete with salary offers may find that offering alternative work arrangements such as flextime will be effective for employee retention and recruitment, as there is great interest in these arrangements among workers 50+. In particular, employers might offer caregiving leave or other accommodations to support workers with eldercare responsibilities.

Similarly, employers might consider offering alternative and flexible work arrangements or phased retirement as part of a work exit strategy for older workers.

Since financial motivation for remaining in the labor force decreases with age, employers interested in retaining workers age 65 and over may find it effective to emphasize non-financial benefits to the employees, such as the opportunity to engage with others and to work on projects they truly enjoy.

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AGE-RELATED PREFERENCES

Most workers 50+ are in the labor force for financial reasons, but this motivation decreases with age.

% of workers 50+ in the labor force for financial reasons, 2011

Note: Financial reasons = the need for money or insurance. Results from a nationally representative survey of 1,004 people 50+ in the labor force.
Reproduced by: Stanford Center on Longevity.
Source: AARP and SHRM.

Workers age 50 and over are more interested in flextime than any other alternative work arrangement.

% of workers 50+ who cite flexible work arrangements as “very important,” 2011

Note: Results from a nationally representative survey of 1,004 people 50+ in the labor force.
Reproduced by: Stanford Center on Longevity.
Source: AARP and SHRM.
More than one quarter of women age 45-64 were unpaid eldercare providers in 2011.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>15+</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>45-54</td>
<td>19%</td>
<td>27%</td>
</tr>
<tr>
<td>55-64</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>65+</td>
<td>15%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Note: Eldercare provider = provided unpaid care for someone with a condition related to aging.
Analysis: Stanford Center on Longevity.
Source: BLS.
**Total compensation:** Although total compensation varies widely by occupation, benefits account for about one-third of total compensation cost across all occupations. Insurance costs are the most expensive benefit at 9% of total labor cost.\(^1\) Retirement costs account for 5% of labor cost, up from 4% in 1990 and a low of 3.5% in 2002.\(^2\)

**Retirement plans:** Access to employer-sponsored retirement plans has declined in recent years. Roughly half of workers currently work for employers who sponsor retirement plans, down from 57% in 2000.\(^3\) Employees at larger establishments have greater access to retirement plans and are more likely to participate when eligible.\(^4\)

Participation in retirement plans varies with age. The share of all workers participating in an employer-sponsored retirement plan increases with age—but only up to age 64, after which it decreases. In 2011, 50% of all workers age 55-64 participated in a retirement plan, compared to 36% of workers age 25-34 and only 31% of workers 65+.\(^5\)

Defined benefit (DB) plans are becoming less common, though some companies continue to offer them to new hires. A survey of 424 DB sponsors at mid-size and large companies found that 17% still offer DB plans to new hires. These companies reported employee retention as the top reason for continuing to offer such plans.\(^6\)

**Implications:** Employers face the key challenge of managing insurance costs, which account for a larger share of total compensation than do retirement costs. This challenge is compounded by uncertainty surrounding implementation of the Affordable Care Act (ACA), which may create unintended consequences for both employers and employees.

Employees at smaller establishments may be less prepared for retirement, as they are less likely to have access to retirement plans and less likely to enroll in a plan when eligible. As a result, they may be particularly inclined to work longer, a pattern small employers might want to consider.

Employers seeking to attract and recruit new employees might consider offering a retirement plan as a way to distinguish themselves. Employers who currently offer defined benefit plans might consider retaining them, rather than freezing them. Although defined benefit plans are less common, some companies consider them a useful tool for employee retention.

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\(^3\) Employee Benefits Research Institute, “Employment-Based Retirement Plan Participation: Geographic Differences and Trends” (2011): Figure 19.


Benefits account for about one-third of total labor cost.

Labor cost per hour worked, civilian workers, 2012

<table>
<thead>
<tr>
<th>Category</th>
<th>Wages &amp; salaries</th>
<th>Total benefits</th>
<th>Total Labor Cost Per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Workers</td>
<td>$30.84</td>
<td>$31%</td>
<td>$30.84</td>
</tr>
<tr>
<td>Management &amp; professional</td>
<td>$31%</td>
<td>$31%</td>
<td>$51.03</td>
</tr>
<tr>
<td>Natural resources &amp; construction</td>
<td>$30%</td>
<td>$33%</td>
<td>$32.36</td>
</tr>
<tr>
<td>Production &amp; transportation</td>
<td>$24.97</td>
<td>$34%</td>
<td>$24.97</td>
</tr>
<tr>
<td>Sales &amp; office</td>
<td>$23.11</td>
<td>$30%</td>
<td>$23.11</td>
</tr>
<tr>
<td>Service</td>
<td>$16.62</td>
<td>$29%</td>
<td>$16.62</td>
</tr>
</tbody>
</table>

Analysis: Stanford Center on Longevity.
Source: BLS.

Roughly half of all workers currently work for employers who sponsor retirement plans, down from 57% in 2000.

% of all workers whose employer sponsored a retirement plan; % of all workers who participated in a plan, 1991-2011

Analysis: Stanford Center on Longevity.
Source: EBRI.
Employees of large private companies have greater access to retirement plans.

% of private sector whose employer sponsors a plan, by employer size, 2011

<table>
<thead>
<tr>
<th>Employer Size (mil)</th>
<th>% Access</th>
<th># of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>14%</td>
<td>31</td>
</tr>
<tr>
<td>10-49</td>
<td>30%</td>
<td>22</td>
</tr>
<tr>
<td>50-99</td>
<td>43%</td>
<td>10</td>
</tr>
<tr>
<td>100-499</td>
<td>55%</td>
<td>16</td>
</tr>
<tr>
<td>500-999</td>
<td>61%</td>
<td>6</td>
</tr>
<tr>
<td>1000+</td>
<td>65%</td>
<td>45</td>
</tr>
<tr>
<td>Private Sector Total</td>
<td>44%</td>
<td>131</td>
</tr>
</tbody>
</table>

# of workers by employer size (mil): 31 22 10 16 6 45 131

# with access: 4 7 4 9 4 30 57

Analysis: Stanford Center on Longevity.
Source: EBRI.
Work schedule: The share of senior workers working full-time has been rising since the mid-1990s. Since 2000, a majority of workers 65+ have worked full-time. But senior workers are still more likely than their younger counterparts to work part-time. In 2007, for example, 44% of workers 65+ worked part-time, compared to 17% of all workers. This pattern is also evident among workers 55+, who make up a disproportionate share of the part-time workforce. In 2012, workers 55+ made up 21% of all workers, but 25% of part-time workers.¹

Self-employment: Older workers are also more likely than any other age group to be self-employed. At 15% of the 65+ labor force, workers age 65 and over have the highest rate of self-employment.²

Entrepreneurship: In addition, the share of new entrepreneurs who are 55-64 has risen sharply in recent years. This is a result of both the aging of the population and increased rates of entrepreneurship among older people. In 1996, entrepreneurs age 55-64 made up 14.3% of new business owners; in 2011, they made up 20.9%.³

Implications: As employers turn to senior workers, they may need to accommodate the increasing percentage that chooses to work full-time. The disproportionate share of workers 55+ working part-time also presents a potential pool of labor that employers could shift into full-time workers.

Since workers 65+ have the highest rate of self-employment, they may be attracted by contract, short-term and otherwise flexible work arrangements that provide a large degree of independence and self-direction. In addition, employers searching for innovative employees might consider workers age 55-64, who are becoming a larger share of new entrepreneurs.

Conversely, employers who are interested in moving older workers out of their current positions may find it useful to provide training in new business creation. Similarly, employers could offer short-term or contract work as part of a work exit strategy for older workers.

The share of those 65+ working full-time has increased to 56%, but still remains far lower than the 83% for all workers.

Employed persons by work schedule, select ages, 1970-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Full-time, all workers</th>
<th>Full-time, 65+</th>
<th>Part-time, 65+</th>
<th>Part-time, all workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>83%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td></td>
<td>56%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Full-time = 35 hours or more per week; part-time = fewer than 35 hours per week.
Analysis: Stanford Center on Longevity.
Source: BLS.

Of the 28 million part-time workers, 25% (7 million) are age 55+.

Number of employed persons by age and work schedule, millions, 2012

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Part-time</th>
<th>Full-time</th>
<th>All workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-19</td>
<td>7</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>20-24</td>
<td></td>
<td></td>
<td>143</td>
</tr>
<tr>
<td>25-54</td>
<td></td>
<td></td>
<td>143</td>
</tr>
<tr>
<td>55+</td>
<td></td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

Note: Full-time = 35 hours or more per week; part-time = fewer than 35 hours per week.
Analysis: Stanford Center on Longevity.
Source: BLS.
The Aging US Workforce
July 2013

The share of new entrepreneurs age 55-64 rose to 21% in 2011.

Age distribution of new entrepreneurs, 1996 and 2011

Note: New entrepreneur = adult who started a new business in the last month.
Analysis: Stanford Center on Longevity.
Source: Kauffman Foundation.

Workers 65+ have the highest rate of self-employment.

Self-employment by age, 2012 (in unincorporated businesses)

Note: Self-employed = those who work for profit or fees in their own unincorporated business, profession, or trade; incorporated business owners are included in wage and salary; all chart data refer to nonagricultural industries.
Analysis: Stanford Center on Longevity.
Source: BLS.
This Appendix includes three sections: Definitions, Major Occupational Categories, and Surveys.

**Definitions**

*Civilian worker:* The National Compensation Survey defines Civilian Workers as the sum of all private industry and State and local government workers. Federal Government, military and agricultural workers are excluded.
Source: Bureau of Labor Statistics, Glossary

*Eldercare providers:* Those who provide unpaid care to someone over the age of 65 who needs help because of a condition related to aging.
Source: Bureau of Labor Statistics, American Time Use Survey

**Employer Costs for Employee Compensation – Benefit Categories:**

- **Paid leave:** Vacation, Holiday, Sick, Personal
- **Supplemental pay:** Overtime and premium, Shift differentials, Nonproduction bonuses
- **Insurance:** Life, Health, Short-term disability, Long-term disability
- **Retirement and savings:** Defined benefit, Defined contribution
- **Legally required benefits:** Social Security, Medicare, Federal unemployment insurance, State unemployment insurance, Workers’ compensation
Source: Bureau of Labor Statistics

**Establishment:** A single physical location where business is conducted or where services or industrial operations are performed.
Source: U.S. Census Bureau

**Firm:** A firm is a business organization consisting of one or more domestic establishments in the same state and industry that were specified under common ownership or control. The firm and the establishment are the same for single-establishment firms.
Source: U.S. Census Bureau

**Industry:** A group of establishments that produce similar products or provide similar services. For example, all establishments that manufacture automobiles are in the same industry. A given industry, or even a particular establishment in that industry, might have employees in dozens of occupations. The North American Industry Classification System (NAICS) groups similar establishments into industries. NAICS is replacing the former Standard Industrial Classification (SIC) system.
Source: Bureau of Labor Statistics, Glossary
APPENDIX

**Kauffman Index of Entrepreneurial Activity:** The percentage of the adult, non-business-owner population that starts a business each month, measured using data from the Current Population Survey (CPS). The index captures all new business owners, including both incorporated and unincorporated businesses and those who are employers or non-employers.


**New entrepreneur:** Adult (age 20-64) who is not a business owner in the first survey month of the Current Population Survey (CPS) but has started a business as his/her main job in the following survey month.


**Occupation:** A set of activities or tasks that employees are paid to perform. Employees that perform essentially the same tasks are in the same occupation, whether or not they work in the same industry. Some occupations are concentrated in a few particular industries; other occupations are found in many industries. (See next section for a description of the major occupational groups used in the Current Population Survey.)

Source: Bureau of Labor Statistics, Glossary

**Part-time for Economic Reasons (or involuntary part time):** Refers to those who worked 1 to 34 hours during the reference week for an economic reason such as slack work or unfavorable business conditions, inability to find full-time work, or seasonal declines in demand.

Source: Bureau of Labor Statistics

**Part-time for Noneconomic Reasons:** Refers to persons who usually work part-time for noneconomic reasons such as childcare, family or personal obligations, school or training, retirement or Social Security limits on earnings, and other reasons. This excludes persons who usually work full-time but worked only 1 to 34 hours during the reference week for reasons such as vacations, holidays, illness, and bad weather.

Source: Bureau of Labor Statistics

**Percentage of workers participating in a retirement plan:** The fraction of workers in the specified work force who participate in an employment-based pension or retirement plan regardless of the worker’s eligibility (offered a plan and meets the requirements to participate) in a plan.

Source: Employee Benefit Research Institute

**Percentage of workers working for an employer who sponsors a retirement plan:** The percentage of workers in the specified work force who worked for an employer or union that sponsored a retirement plan in a given year for any of its employees, not necessarily for the worker in question.

Source: Employee Benefit Research Institute

**Self-employed:** Those who work for profit or fees in their own business, profession, trade, or farm; only the unincorporated self-employed are included in the self-employed category.

Source: Bureau of Labor Statistics, Glossary

**Take-up rate:** The percentage of workers with access to a retirement plan who participate in a plan.

Source: Bureau of Labor Statistics
APPENDIX

**Work disability:** As defined by the Current Population Survey (CPS), refers to meeting any of the following criteria:

- Individuals who have a health problem or disability which prevents them from working or which limits the kind or amount of work they can do
- Individuals who ever retired or left a job for health reasons
- Individuals who are not in the labor force because of a disability
- Individuals who did not work at all in the previous year because of illness or disability
- Individuals under 65 years old who were covered by Medicare
- Individuals under 65 years old who received Supplemental Security Income (SSI) in previous year
- Individuals who received VA disability income in previous year


**Wage and salary workers:** Workers who receive wages, salaries, commissions, tips, payment in kind, or piece rates. The group includes employees in both the private and public sectors.

Source: Bureau of Labor Statistics, Glossary

**Major Occupational Categories**

**Management, professional, and related occupations:** Management, business, and financial operations occupations (e.g. CEOs, financial managers, HR managers, agents, fundraisers), Professional and related occupations (e.g. computer and mathematical occupations, architects, engineers, lawyers, teachers, writers, health care practitioners and technicians, doctors, nurses).

**Natural resources, construction, and maintenance occupations:** Farming, fishing, and forestry occupations (e.g. animal breeders, hunters, loggers), Construction and extraction occupations (e.g. carpenters, electricians, earth drillers), Installation, maintenance, and repair occupations (e.g. aircraft mechanics, automotive repairers).

**Production, transportation, and material moving occupations:** Production occupations (e.g. engine assemblers, machinists, welders, woodworkers), Transportation and material moving occupations (e.g. aircraft pilots and flight engineers, flight attendants, bus drivers, taxi drivers).

**Sales and office occupations:** Sales and related occupations (e.g. cashiers, sales representatives, travel agents), Office and administrative support occupations (e.g. telephone operators, tellers, receptionists, mail carriers, office clerks).

**Service occupations:** Health care support occupations (e.g. nursing aides, medical assistants), Protective service occupations (e.g. police, firefighters), Food preparation and serving related occupations (e.g. chefs, waiters, hosts, dishwashers), Building and grounds cleaning and maintenance occupations (e.g. housekeepers, pest-control), Personal care and service occupations (e.g. hairdressers, childcare workers, morticians).


For a full list of occupations, see http://www.bls.gov/cps/cenocc.pdf
APPENDIX

Surveys

Current Population Survey (CPS): A national survey that samples 60,000 households on a monthly basis and collects information on labor force characteristics of the U.S. civilian noninstitutional population. This universe includes civilians in households, people in noninstitutional group quarters (other than military barracks) and military in households living off post or with their families on post (as long as at least one household member is a civilian adult). The universe excludes other military in households and in group quarters (barracks), and people living in institutions. The CPS is conducted by the Census Bureau for the Bureau of Labor Statistics.
Source: Bureau of Labor Statistics, Glossary

Annual Social and Economic Supplement (ASEC) to the CPS: The source of information used to produce the official annual estimate of poverty, and estimates of a number of other socioeconomic and demographic characteristics, including income, health insurance coverage, school enrollment, marital status, and family structure.
Source: U.S. Census Bureau

American Community Survey (ACS): A national survey conducted every year to provide up-to-date information about the social and economic needs of communities. Information from the survey generates data that help determine how more than $400 billion in federal and state funds are distributed each year. The ACS shows how people live—education, housing, jobs and more. The population universe includes both the civilian and military population in households and excludes the group quarters population. The group quarters population consists of the institutionalized (such as people in correctional institutions or nursing homes) and the noninstitutionalized (most of whom are in college dormitories). The ACS began a group quarters data collection effort in 2006 and released the first total population estimates in 2007.
Source: U.S. Census Bureau

American Time Use Survey (ATUS): A national survey that measures the amount of time people spend doing various activities, such as work, childcare, housework, watching television, volunteering, and socializing. It is sponsored by the Bureau of Labor Statistics and is conducted by the U.S. Census Bureau.
Source: Bureau of Labor Statistics

National Compensation Survey (NCS): A BLS establishment survey of employee salaries, wages, and benefits. The survey produces the Employment Cost Index (ECI) as well as the Employment Cost for Employee Compensation (ECEC) along with employee benefit incidence and provision data.
Source: Bureau of Labor Statistics
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*Bottom Chart*

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Center for Retirement Research, *Survey of Employer Attitudes towards Older Workers*, 2006, Table 1.

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Deloitte and The Manufacturing Institute, *Boiling Point? The Skills Gap in US Manufacturing*, 2011, Figure 6.

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Employee Benefits Research Institute, *Employee Tenure Trends, 1983-2012*, 2012, Figure 1.

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Employee Benefits Research Institute, Employment-Based Retirement Plan Participation: Geographic Differences and Trends: 2011, 2012, Figure 19.

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Employee Benefits Research Institute, Employment-Based Retirement Plan Participation: Geographic Differences and Trends: 2011, 2012 Figure 2.

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The Stanford Center on Longevity

The mission of the Stanford Center on Longevity is to redesign long life. The Center studies the nature and development of the human life span, looking for innovative ways to use science and technology to solve the problems of people over 50 in order to improve the well-being of people of all ages.

Working as a catalyst for change, the Center identifies challenges associated with increased life expectancy, supports scientific and technological research concerning those challenges, and coordinates efforts among researchers, policy makers, entrepreneurs, and the media to find effective solutions.

The Center was founded in 2006 by two of the world’s leading authorities on longevity and aging. Laura Carstensen PhD, professor of psychology, is the founding director, and Thomas Rando MD, PhD, professor of neurology and neurological sciences, is deputy director. The Center received its initial funding from Richard Rainwater.

The Financial Security Division, directed by senior research scholar Martha Deevy, brings a unique interdisciplinary perspective to financial security issues facing our society by rethinking the perceived problems around an aging population, especially retirement planning and the need to work longer. By understanding the role that research, education, and policy can play in solving these issues and looking at the problems from multiple perspectives, the division drives the dialogue forward in order to facilitate a healthier state of long-term financial security for the individual and society.

In August 2012, the Stanford Center on Longevity announced a partnership with Marsh and McLennan Companies that will focus on the issues of financial security. Building on the combined expertise and capabilities, the Center brings together the best thinkers, policymakers, and business leaders to drive innovation and change around financial security issues.