In recent years, the American labor force has aged dramatically.

According to Mitra Toossi of the Bureau of Labor Statistics, the share of the labor force age 55+ grew from 13.1% in 2000 to 19.5% in 2010 and is expected to increase to 25.2% in 2020. This growth is due in part to overall demographic changes; the first baby boomers turned 65 in 2011, and the number of older people will continue to rise sharply as the baby boomers age. But it is also due to increased labor force participation rates among older people. In 2000, 32.4% of people age 55+ were in the labor force; by 2010, this number had climbed to 40.2%. For various reasons, primarily financial necessity, many older people are delaying retirement and staying in the labor force.

How will employers adapt to this change?

Initial research suggests that the aging workforce presents both challenges and opportunities for employers. Alicia Munnell and Steven Sass noted in their 2008 book, “Working Longer”, while older workers can be valuable sources of knowledge and experience, they are also perceived to be expensive; they generally have higher wages than their younger counterparts and their health insurance can cost more. Further, government policies regarding retirement plans and healthcare programs can sometimes act as disincentives to employing older workers. To optimize the value of the aging workforce, it is important for employers to address these challenges and to identify ways to leverage the knowledge and experience of older workers.

The Stanford Center on Longevity is convening this conference, sponsored by Marsh & McLennan Companies, to provide a forum for employers to discuss strategies to adapt to the aging workforce.

The goals of the conference are to:

• Identify current successful strategies
• Brainstorm potential strategies for employers to use
• Develop a list of research questions that need to be addressed

Discussion topics will focus on a number of areas where employers might implement specific workforce strategies and also include conversation on real-world examples:

• Company case studies
• Workplace management
• Compensation
• Job and workplace design
• Lessons from previous workplace shifts

Included in this booklet is a package of reading materials that will provide common context and understanding for our discussions. The first section is a short list of known programs and practices currently being used by employers. The second section is a chartbook compiled by Stanford Center on Longevity which provides key facts about the demographics of the aging U.S. workforce.

We welcome your participation and look forward to an engaging conversation.

Martha Deevy
Senior Research Scholar and Director, Financial Security Division, Stanford Center on Longevity

M. Michele Burns
CEO, Retirement Policy Center, Marsh & McLennan Companies, Inc.; Center Fellow and Strategic Advisor, Stanford Center on Longevity
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AGENDA

Thursday, April 18

7:45 – 8:30      Breakfast
8:30 – 8:45      Welcome/Logistics
8:45 – 9:30      Introductions
9:30 – 10:30     Setting the Stage: Demographics/Data Analysis
                 Adele Hayutin, Stanford Center on Longevity
10:30 – 10:45    Break
10:45 – 11:45    The Employer Point of View: Case Studies
12:00 – 1:00     Lunch
1:00 – 2:45      Workplace Management Discussion
2:45 – 3:00      Break
3:00 – 4:45      Compensation Practices Discussion
4:45 – 5:15      Wrap-Up/Key Take-Aways

Shuttle will be provided back to
Sheraton Palo Alto
625 El Camino Real
Palo Alto, CA 94301

MacArthur Park Restaurant is across the street from hotel

6:00 – 9:00      Cocktails and Dinner
                 MacArthur Park Restaurant
                 27 University Ave
                 Palo Alto, CA 94301

Dinner Speaker: Gene Steuerle, Urban Institute (6:30-7:15)

Friday, April 19

7:45 – 8:30      Breakfast
8:30            Welcome/Logistics
8:30 – 10:15    Job and Workplace Design Discussion
10:00 – 10:15   Break
10:15 – 11:30   Lessons learned from other organizational/workplace disruptions
11:30 – 12:00   Wrap-Up/Conclusions
ATTENDEES

Laura Carstensen (Co-Chair) – Farleigh S. Dickinson Jr. Professor in Public Policy and Professor of Psychology, Stanford University; Director, Stanford Center on Longevity

M. Michele Burns (Co-Chair) – Executive Director, Retirement Policy Center Sponsored by Marsh & McLennan Companies; Fellow and Strategic Advisor, Stanford Center on Longevity

Gretchen Addi – Business Lead, IDEO

Janice Angell – Vice President, Compensation and Benefits, 3M Company

Stephen Barley – Associate Chair and Richard W. Weiland Professor in Management Science and Engineering; Co-Director of the Center for Work, Technology, and Organization, School of Engineering, Stanford University

Kathleen Christensen – Program Director, Working Longer, Alfred P. Sloan Foundation

Harry Conaway – Senior Partner and Leader, Washington Resource Group, Mercer (Marsh & McLennan Companies)

Martha Deevy – Senior Research Scholar and Director, Financial Security Division, Stanford Center on Longevity

Tricia Dirks – Senior Vice President, Organizational Effectiveness-Human Resources, Target

Margaret Dyer-Chamberlain – Senior Research Scholar and Managing Director, Stanford Center on Longevity

Marc Freedman – Founder and CEO, Encore.org

Daniel Goldberg – National Director, Workforce Planning and Information Management, Kaiser Permanente

Ray Goldberg – Vice President, Global Benefits and Mobility, Marsh & McLennan Companies

Tami Graham – Director of Global Benefits Design, Intel

Walter Greenleaf – Senior Research Scholar and Director, Mind Division, Stanford Center on Longevity

Rick Guzzo – Partner, Mercer (Marsh & McLennan Companies)

Sally Hass – Workplace Retirement Educator

Adele Hayutin – Senior Research Scholar and Director of Demographic Analysis, Stanford Center on Longevity

Jim Johnson – Chairman and CEO, Johnson Capital Partners

Sonja Kellen – Director of Global Retirement Benefits, Microsoft

Dan Kessler – Professor of Law, Stanford Law School; Senior Fellow, Hoover Institution; David S. and Ann M. Barlow Professor of Political Economy, Stanford Graduate School of Business; Professor, by courtesy, Health Research and Policy, Stanford School of Medicine
Attendees

**Joe Laymon** – Vice President, Human Resources, Medical and Security, Chevron

**Leslie Mays** – Vice President and Chief Inclusion Officer, Avon

**Haig Nalbantian** – Senior Partner and Co-Founder/Leader, Workforce Sciences Institute, Mercer (Marsh & McLennan Companies)

**Kristin Oliver** – Executive Vice President, Walmart U.S. People

**John Pencavel** – Pauline K. Levin-Robert L. Levin and Pauline C. Levin-Abraham Levin Professor in the School of Humanities and Sciences, Stanford University; Senior Fellow, by courtesy, at the Stanford Institute for Economic Policy Research

**Jeffrey Pfeffer** – Thomas D. Dee II Professor of Organizational Behavior, Stanford Graduate School of Business

**Phyllis Stewart Pires** – Director, Worklife Strategy, Stanford University

**Phil Pizzo** – Former Dean, Stanford School of Medicine

**Randy Pond** – Executive Vice President, Operations, Processes, and Systems, Cisco

**Thomas Rando** – Professor of Neurology and Neurological Sciences, Stanford School of Medicine; Deputy Director, Stanford Center on Longevity

**Gopi Shah Goda** – Senior Research Scholar, Stanford Institute for Economic Policy Research

**John Shoven** – Charles R. Schwab Professor of Economics, Stanford University; Wallace R. Hawley Director, Stanford Institute for Economic Policy Research; Senior Fellow, by courtesy, Hoover Institution

**Ken Smith** – Senior Research Scholar and Director, Mobility Division, Stanford Center on Longevity

**Erik Sossa** – Vice President, Global Benefits and Wellness, PepsiCo

**Cary Sparrow** – Vice President, Human Resources Performance and Analytics, Cargill

**Gene Steuerle** – Senior Fellow and Richard B. Fisher Chair, The Urban Institute

**Gabrielle Thompson** – Vice President, Total Rewards, Cisco

**Justin Thornton** – Executive Vice President, Head of Compensation and Benefits, Wells Fargo

**Lindsey Trimble-O’Connor** – Postdoctoral Fellow, Michelle R. Clayman Institute for Gender Research, Stanford University
Business Case Examples
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<tr>
<td>CVS/Caremark</td>
<td>Retention/Staffing Flexibility</td>
<td>Snowbird Program - Flexible work option that offers older workers the opportunity to transfer to different CVS/pharmacy store regions on a seasonal basis.</td>
<td><a href="http://capricorn.bc.edu/agingandwork/database/browse/case_study/24047">http://capricorn.bc.edu/agingandwork/database/browse/case_study/24047</a></td>
</tr>
<tr>
<td>Fidelity</td>
<td>Retention/Staffing Flexibility</td>
<td>Retirement Services Staffing Model – Recruits older workers to staff the retirement services customer service call center. Features a flexible staffing model that includes part-time and seasonal options.</td>
<td><a href="http://capricorn.bc.edu/agingandwork/database/browse/case_study/24076">http://capricorn.bc.edu/agingandwork/database/browse/case_study/24076</a></td>
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<tr>
<td>Pitney Bowes</td>
<td>Employee Retirement Bubble</td>
<td>Phased Retirement Program – Developed a program that includes: • One-on-one conversations with employees to discuss options for structuring their phased retirement. • Planned, phased retirement. • Flexible schedules; use of condensed work weeks, reduced work weeks, or telecommuting.</td>
<td><a href="http://capricorn.bc.edu/agingandwork/database/browse/case_study/24102">http://capricorn.bc.edu/agingandwork/database/browse/case_study/24102</a></td>
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<tr>
<td>MITRE</td>
<td>Recruitment/Knowledge Transfer</td>
<td>Flexible Work Options for Mature Workers – Phased retirement program that provides a gradual, planned transition to retirement. Part-Time On-Call Program – Program that allows retirees to provide short-term project support for complex and highly specialized projects.</td>
<td><a href="http://capricorn.bc.edu/agingandwork/database/browse/case_study/24046">http://capricorn.bc.edu/agingandwork/database/browse/case_study/24046</a></td>
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<td>Central Baptist Hospital</td>
<td>Retention/Knowledge Transfer</td>
<td>Career Coaching Program – Provides nurses with support for “reca reering” – that is, transitioning to different nursing roles or schedules or continuing their education and moving into other health care practice areas. Flexible Scheduling Options – Includes part-time, seasonal positions with benefits; move to part-time in same position/level; transfer to position with reduced patient care responsibilities; job sharing; and shorter shifts.</td>
<td><a href="http://capricorn.bc.edu/agingandwork/database/browse/case_study/24126">http://capricorn.bc.edu/agingandwork/database/browse/case_study/24126</a></td>
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<tr>
<td>BMW</td>
<td>Retention/Worker Productivity</td>
<td>Pensioner’s Assembly Lines - Introduced 70 small, mostly ergonomic, changes, such as adding barbershop chairs so older workers could perform tasks sitting down or standing up and providing orthopedic shoes for comfort. Productivity increased to be on par with lines where the average worker was younger.</td>
<td><a href="http://www.businessweek.com/articles/2012-08-07/its-time-to-see-older-workers-as-an-asset">http://www.businessweek.com/articles/2012-08-07/its-time-to-see-older-workers-as-an-asset</a></td>
</tr>
<tr>
<td>Staff Management SMX</td>
<td>Retention/Staffing Flexibility</td>
<td>Work Campers - Developed a staffing organization that sends retirees with specialized skills from city to city in recreational vehicles to fill in where they are needed. They support companies that have specialized short-term needs.</td>
<td><a href="http://www3.cfo.com/article/2012/6/training_baby-boomers-retirement-hiring-managing-older-workers-knowledge-transfer?currpage=3">http://www3.cfo.com/article/2012/6/training_baby-boomers-retirement-hiring-managing-older-workers-knowledge-transfer?currpage=3</a></td>
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<tr>
<td>Sodexo Canada</td>
<td>Recruiting/Retention</td>
<td>Experience Benefits – New hires generally get 3 weeks of vacation in year one but those who come with experience get up to 10 weeks. <strong>Ongoing Training/Two-Way Mentoring</strong> - Pairs an experienced worker with a younger worker. According to a company representative, this arrangement benefits both younger and older workers: “It helps our older employees keep up with new trends, especially in technology, while also being able to share their wisdom with their younger mentor.”</td>
<td><a href="http://www.theglobeandmail.com/report-on-business/careers/business-education/dont-sweep-older-workers-under-the-rug/article4374579/">http://www.theglobeandmail.com/report-on-business/careers/business-education/dont-sweep-older-workers-under-the-rug/article4374579/</a></td>
</tr>
<tr>
<td>Scripps Hospital</td>
<td>Recruiting/Retention</td>
<td><strong>Return to Work Program</strong> - Provides individual assistance to workers, including an assigned, on-site nurse care manager to help keep the employee engaged and ensure the success of the employee’s job accommodation or disability recovery. <strong>Scripps Alumni Network</strong> - Maintains an ongoing relationship with former employees and recruits them back to the organization with temporary work assignments, consulting and contract work, telecommuting, and full- and part-time work.</td>
<td><a href="http://www.hhnmag.com/hhnmag/jsp/articledisplay.jsp?dcrpath=HHNMAG/Article/data/01JAN2008/0801HNN_FEA_Gatefold&amp;domain=HHNMA">http://www.hhnmag.com/hhnmag/jsp/articledisplay.jsp?dcrpath=HHNMAG/Article/data/01JAN2008/0801HNN_FEA_Gatefold&amp;domain=HHNMA</a> G</td>
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DEMOGRAPHICS OF THE AGING WORKFORCE - Summary

WORKING DRAFT - April 9, 2013

Prepared for Stanford Center on Longevity Conference
Adapting to an Aging Workforce
April 18-19, 2013

Adele Hayutin, PhD
Michaela Beals
Elizabeth Borges

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longevity.stanford.edu/financial-security
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This chartbook summarizes key aspects of the demographics of the aging U.S. workforce. Our goal in compiling this information is to provide a big picture framework for thinking about the challenges and opportunities that are emerging from ongoing demographic shifts. Where possible we have provided historical context for understanding how key variables have evolved. We have also provided a comparative perspective for understanding how different age groups and industries are changing.

We begin our discussion with general information about population shifts, labor force comparisons, and industry and occupation comparisons. We then examine issues and implications related to job tenure and employment, age-related work preferences, compensation, and job types.

We have developed this report as 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.”

This compendium of charts is a work in progress and we are delighted to present this working draft to the conference attendees. We expect the conference dialogue to help identify conclusions and implications. Our next iteration will include further analysis and more details, and so we welcome your comments, suggestions, and questions.

We thank Marsha Deevy for outlining the need for this project and we thank Marsh & McLennan Companies for supporting the work.
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 55% in 2010 to 50% in 2060.

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. The white population will decline by about 10% while the Hispanic population will more than double. 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.

For example, 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 young workers may be an option when older workers leave the workforce. Similarly, retention and possibly retraining of mature workers may become increasingly attractive.

---

Population Shifts

The age structure of the population shifts from pyramid to cube as more people reach old age.

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>
<th>% 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>151 million</td>
<td>87 million</td>
<td>58%</td>
<td>64 million</td>
<td>8%</td>
</tr>
<tr>
<td>2010</td>
<td>309 million</td>
<td>185 million</td>
<td>60%</td>
<td>144 million</td>
<td>13%</td>
</tr>
<tr>
<td>2050</td>
<td>400 million</td>
<td>221 million</td>
<td>55%</td>
<td>179 million</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, 2010 and 2012.

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>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>+5.7</td>
</tr>
<tr>
<td>20-44</td>
<td>+6.4</td>
<td>+4.5</td>
</tr>
<tr>
<td>&lt; 20</td>
<td>+1.3</td>
<td>-2.4</td>
</tr>
</tbody>
</table>

Note: Population by five-year age bracket.
Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau, 2010 and 2012.
Population Shifts

The conventional working-age brackets will increase by less than 30% over the next 50 years; the population 65+ will more than double.

Working-age population, 1950-2060

Millions

Indexed: 2010=1

Note: Conventional working age = 20-64.
Analysis: Stanford Center on Longevity.
Source: U.S. Census Bureau, 2010 and 2012.

The Hispanic population will more than double over the next 50 years; the white population will decline.

Population by race and ethnicity, 2015-2060

Millions

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.
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. 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 population age 55-74 in 2008, approximately 16 million, or 31% of the total, were not working for a reason other than a work disability. 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.

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.

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 young workers.

---

4 Center for Retirement Research, 2006.
Labor Force Shifts

The labor force participation rate for men age 65+ is rising after years of decline.

![Graph showing labor force participation rates](image)

Each age bracket swells as the boomers enter the labor force.

![Graph showing labor force by age](image)
By 2020, 25% of the labor force will be age 55+, a higher share than ever before.

Percent distribution of the labor force, by age, 1950-2020

Analysis: Stanford Center on Longevity.

In 2008, 16 million people age 55-74 were not working for a reason other than work disability.

Work and disability status, by age, millions, 2008

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, 2008.
Labor Force Shifts

College graduates under age 50 outnumber college graduates age 50 and over.

Educational attainment of the population by age, millions, 2012

<table>
<thead>
<tr>
<th>Age Group</th>
<th>&lt; Age 50</th>
<th>Age 50+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grad degree</td>
<td>12 million</td>
<td>12 million</td>
</tr>
<tr>
<td>BA or higher</td>
<td>38 million</td>
<td>29 million</td>
</tr>
</tbody>
</table>

Analysis: Stanford Center on Longevity.

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

Percentage of employers rating workers 55+ as:

- Less Productive
- More Productive

White collar
- 6% Less Productive
- 56% More Productive

Rank and file
- 19% Less Productive
- 41% More Productive

Note: Results from a survey of 400 private sector employers.
Reproduced by: Stanford Center on Longevity.
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 is employed in transportation and warehousing (24%), other professional services (24%), and public administration (23%).

The industries with large shares of older workers 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 healthcare, 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.

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. 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 healthcare support, protective service jobs, food preparation, and related occupations.

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.

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7 Deloitte and The Manufacturing Institute, 2011.
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

Industry employment

- Health care & social assistance: 19
- Retail trade: 16
- Manufacturing: 14
- Educational services: 13
- Accommodation & food services: 10
- Professional & technical services: 10
- Construction: 9
- Public admin: 7
- Other services: 7
- Finance & insurance: 6
- Mgmt, admin, waste: 6
- Transportation & warehousing: 6
- Wholesale trade: 4
- Information: 3
- Arts & entertainment: 3
- Real estate: 3
- Ag, forestry, fishing, hunting: 2
- Utilities: 1
- Mining & quarrying: 1

Employment, 2011

- All ages: 140 million
- 55+: 29 million
- 65+: 7 million

Analysis: Stanford Center on Longevity.
Source: BLS, 2011.
Of the 29 million workers 55+, 12 million (42%) are in management jobs, and 7 million (24%) are in sales.

Employed persons by major occupation and age, millions, 2011

<table>
<thead>
<tr>
<th>Occupation</th>
<th>16-19</th>
<th>20-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mgm’t&amp; professional</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales &amp; office</td>
<td>5</td>
<td>2</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>3</td>
<td>1</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production &amp; transportation</td>
<td>3</td>
<td>1</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural resources &amp; construction</td>
<td>2</td>
<td>1</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: See selected definitions for examples of each major occupation. Analysis: Stanford Center on Longevity. Source: BLS, 2011.

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

Replacement needs, projected 2010-20, millions

Service: 7.7
Office & Administrative Support: 4.9
Sales & Related: 4.6
Education, Legal, Comm Service, Arts, Media: 3.4
Management, Business, Financial: 3.2
Transportation & Material Moving: 2.3
Production Occupations: 1.7
Healthcare Practitioners & Technical: 1.6
Computer, Engineering, and Science: 1.6
Construction & Extraction: 1.4
Installation, Maintenance, Repair: 1.2
Farming, Fishing, Forestry: 0.3

Total replacement needs = 33.7 million

Industry and Occupation

Manufacturing executives expect the shortage of workers in skilled production to increase over the next 3-5 years.

<table>
<thead>
<tr>
<th>Assessment of anticipated availability of qualified workers, next 3-5 years</th>
<th>% of surveyed executives expecting:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>No change</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, 2011.
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 65+ is currently identical to job tenure for female workers 65+: 10.7 years. While this represents peak tenure for women, men experienced peak tenure in 1983 when job tenure was 15.7 years.10 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.11

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.12

**Unemployment:** During the recent recession, men of all ages faced higher unemployment than women.13 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 12 million unemployed, 2 million (or 16%) were 55+.14 As of February 2013, unemployed workers 55-64 had been unemployed for an average of 46 weeks and workers 65+ for an average 42 weeks, compared to an average of 33 weeks for workers 25-34.15

**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.

---

Job Tenure and Unemployment

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

![Graph showing median years of tenure for wage and salary workers, age 25+, 1983-2012.]

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

Of the 12 million unemployed, 2 million, or 16%, are 55+.

Unemployment by age, millions, 2012

![Graph showing unemployment by age, millions, 2012.]

Analysis: Stanford Center on Longevity.
Source: BLS, 2013.
AGE-RELATED PREFERENCES

Alternative work arrangements: Workers 50 and over are more interested in flex time than any other alternative work arrangement. Of workers 50 and over, 35% describe flex time as “very important,” compared to 23% who describe telecommuting as “very important” and 17% who deem job sharing “very important.” But the importance of alternative work arrangements declines with age. For example, 37% of workers 50-59 view flex time as “very important,” compared with 34% of workers 60-69, and 27% of workers age 70+.16

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.17

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.18 This statistic may explain some of the interest in flex time 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 flex time 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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17 Ibid.
Most workers 50+ are in the labor force for financial reasons, but this motivation decreases with age.

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

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Financial Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>50+</td>
<td>78%</td>
</tr>
<tr>
<td>50-59</td>
<td>84%</td>
</tr>
<tr>
<td>60-69</td>
<td>73%</td>
</tr>
<tr>
<td>70+</td>
<td>54%</td>
</tr>
</tbody>
</table>

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, 2011.

37% of workers 50+ find flex time “very important,” but interest in alternative work arrangements decreases with age.

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

<table>
<thead>
<tr>
<th>Work Arrangement</th>
<th>50-59</th>
<th>60-69</th>
<th>70+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex time</td>
<td>37%</td>
<td>28%</td>
<td>15%</td>
</tr>
<tr>
<td>Formal phased retirement</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Compressed work schedule</td>
<td>16%</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>Telecommuting</td>
<td>8%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Job sharing</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

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, 2011.
More than one quarter of women age 45-64 were 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>18%</td>
<td></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, 2011.
COMPENSATION

Total compensation: Although total compensation varies widely by industry, benefits account for about one-third of total compensation cost across all industries. Insurance costs are the most expensive benefit at 9% of total labor cost.\(^{19}\) Retirement costs account for 5% of labor cost, up from 4% in 1990 and a low of 3.5% in 2002.\(^ {20}\)

Retirement plans: Access to employer-sponsored retirement plans has declined in recent years. Only 49% of workers currently work for employers who sponsor retirement plans, down from 57% in 2000.\(^ {21}\) Employees at larger establishments have greater access to retirement plans and are more likely to participate when eligible.\(^ {22}\)

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+.\(^ {23}\)

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.\(^ {24}\)

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.

\(^ {19}\) Bureau of Labor Statistics, Employer Costs for Employee Compensation, 2013, Table 1.
\(^ {21}\) Employee Benefits Research Institute, Employment-Based Retirement Participation: Geographic Differences and Trends, 2011, Figure 19.
\(^ {23}\) Employee Benefits Research Institute, Employment-Based Retirement Participation: Geographic Differences and Trends, 2011, Figures 1 and 2.
Benefits account for about one-third of total compensation cost.

<table>
<thead>
<tr>
<th>Industry</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></td>
<td></td>
<td>$30.84</td>
</tr>
<tr>
<td>Management &amp; professional</td>
<td></td>
<td></td>
<td>$51.03</td>
</tr>
<tr>
<td>Natural resources &amp; construction</td>
<td></td>
<td></td>
<td>$32.36</td>
</tr>
<tr>
<td>Production &amp; transportation</td>
<td></td>
<td></td>
<td>$24.97</td>
</tr>
<tr>
<td>Sales &amp; office</td>
<td></td>
<td></td>
<td>$23.11</td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td>$16.62</td>
</tr>
</tbody>
</table>

Labor cost per hour worked, civilian workers, 2012

Only 49% of all workers currently work for employers who sponsor retirement plans, down from 57% in 2000.

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

Analysis: Stanford Center on Longevity.
Source: BLS, 2013.

Analysis: Stanford Center on Longevity.
Source: EBRI, 2011.
JOB TYPE

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.25

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.26

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%.27

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.

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

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

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

Of the 28 million part-time workers, a quarter (7 million) are 55+.

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

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

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

Self-employment by age, 2012

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.
APPENDIX

Definitions


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

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

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
Appendix

**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

**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
Appendix

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: Healthcare 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
**CHART SOURCES**

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**Labor Force Shifts, pages 11-14**

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

**Industry and Occupation, pages 15-17**

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CHART SOURCES

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N-9
Deloitte and The Manufacturing Institute, *Boiling Point? The Skills Gap in US Manufacturing*, 2011, Figure 6.

**Job Tenure and Unemployment, pages 19-20**

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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 Participation: Geographic Differences and Trends*, 2011, Figure 19.

**Job Type, pages 27-29**

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J-8
Kauffman Foundation, *Kauffman Index of Entrepreneurial Activity*, 2012, Figure 5B.
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