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After the recovery: help needed: the coming labor shortage and how people in encore careers can help solve it

Barry Bluestone
Northeastern University

Mark Melnik
Boston Redevelopment Authority

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After the Recovery: Help Needed

The Coming Labor Shortage and How People in Encore Careers Can Help Solve It

By Barry Bluestone and Mark Melnik
Kitty and Michael Dukakis Center for Urban and Regional Policy, Northeastern University
Boston

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ENCORE CAREERS

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EXECUTIVE SUMMARY

With nearly 10 percent of the American labor force unemployed and another 7 percent so discouraged by their job prospects that they have either dropped out of the labor force altogether or are working at part-time jobs when they would prefer full-time employment, it may come as something of a surprise that within less than a decade, the United States may face exactly the opposite problem – not enough workers to fill expected job openings.

This remarkable turn of events is likely to occur as the baby boom generation reaches traditional retirement age. If this generation retires from the labor force at the same rate and age as current older workers, the baby bust generation that follows will likely be too small to fill many of the projected new jobs. Even when the "echo boomers" – the children of the boomers – hit the labor market, those 55 and older will still be the dominant age cohort.

Between 2015 and 2030, the U.S. Census Bureau projects a total increase in the U.S. population of 47 million. The increase in the number of individuals 55 and older will be more than double the increase of those ages 20 to 54 (an additional 25 million versus an additional 12 million). If this shift in the age distribution to older Americans contributes to substantially reduced labor force participation, long-term economic output and real household income could suffer as jobs go unfilled.

Within less than a decade, the United States may not have enough workers to fill expected job openings.

This analysis is based on official forecasts of population growth from the Census Bureau; official forecasts of job growth and labor force participation from the U.S. Bureau of Labor Statistics; and estimates of the number of jobs in specific occupations based on the Labor Market Assessment Tool developed jointly by the Dukakis Center for Urban and Regional Policy at Northeastern University and the Research Division of the Boston Redevelopment Authority.

Historical Precedent

When the economy recovers from recession – and the economy has always recovered from past recessions – after some period of time, labor shortages typically follow. The best example, of course, is World War II. The nation experienced high unemployment rates throughout the 1930s. It was only after 1941 that war demands prompted tremendous labor shortages and millions of women were recruited into the labor force to meet the need. During the early 1960s there was high unemployment. By the last four years of the decade, the unemployment rate was less than 4 percent each year, and the concern was about "structural unemployment," or a continual shortage of trained employees to fill a large number of job openings.

A similar pattern is likely to emerge in the next 10 years. When the nation comes out of the current jobs recession – and this may take two to three years – we will begin to see spot shortages in labor markets. If the economy continues to improve, the spot shortages will become more general, and we will experience the shortages our research projects.

The Numbers

By 2018, with no change in current labor force participation rates or immigration rates and an expected return to healthy economic growth, we will have more jobs than people to fill them. That's true within the entire economy and particularly true of the fast-growing social sector.

In the economy overall, our research shows that:

- There could be **14.6 million new nonfarm payroll jobs** created between 2008 and 2018 (and a total of 15.3 million including self-employed workers, family members working in family businesses and those in farming).
- Given projected population growth and *current* labor force participation rates, assuming no major change in immigration, there will only be about 9.1 million additional workers to fill all positions. Even taking into account multiple job holders, the total number of jobs that could be filled at current labor force participation rates is 9.6 million, leaving anywhere from **5.0 million to 5.7 million potential jobs vacant.**

In the social sector – here defined as the set of industries covering health care and social assistance, educational services, nonprofit community and religious organizations, the performing arts, museums, libraries and government – our research shows that:

- Between now and 2018 there will be more than 5.2 million new jobs available across a range of private social sector industries with another 1.7 million jobs available in local, state and federal government agencies, **a total of 6.9 million new social sector jobs** overall. These new private and public social sector jobs represent 47 percent of total projected nonfarm payroll employment growth, with the social sector becoming an ever larger part of the national economy. Currently, social sector jobs account for 32 percent of all employment.
- If the expected additional labor force participants distribute themselves between the new social sector jobs and the rest of the economy in the same proportion as the number of projected new jobs, an estimated 4.3 million additional workers can be expected to fill these social sector positions. Taking into account multiple job holders, the number of jobs that could be filled at current labor force participation rates is 4.5 million, leaving anywhere from **2.4 to 2.6 million potential new jobs vacant in these social sector industries.**

When the nation comes out of the current jobs recession, we will begin to see spot shortages in labor markets.

The Impact

A labor shortage of this magnitude, leaving as many as 30 to 40 percent of all projected additional jobs in the social sector vacant, could have a significant impact on our economy and on the quality of life in our communities.

If the full employment gap is not filled, using Congressional Budget Office data, we estimate **the loss in total output could be as high as $3 trillion across a five-year period** beginning in 2018.

In addition, not filling millions of jobs in the social sector will mean having too few workers to meet critical needs in education, government, health care and social services.

A Part of the Solution

Encouraging people to work longer will go a long way toward preventing such a significant labor shortage.

Fortunately, boomers are not expected to retire at anywhere near the same rate as earlier cohorts of older workers. In fact, large increases in labor force participation are expected to occur among those aged 55 and older, with 55- to 64-year-olds increasing their participation rate from 64.5 to 68.1 percent between 2008 and 2018. Those aged 65 to 74 are expected to increase theirs from 25.1 to 30.5 percent. And those 75 and older are projected to increase their participation rate from 7.3 to 10.3 percent.

But these increases may still not be enough to avert a labor shortage. Using official estimates of *projected* labor force participation rates, our research shows that **there would still be 3.3 million to 4.0 million jobs that could go unfilled between now and 2018. More than 1.5 million of these unfilled jobs would be in the social sector.**

Providing job opportunities for older adults to work in the types of jobs they really want to pursue will increase the likelihood that they will work past traditional retirement age. And previous research shows that about half of Americans age 44 to 70 want paid work improving the quality of life in their communities – or encore careers. Jobs in the social sector industries examined here, and others that also serve a social purpose but are beyond the scope of this analysis, fit the bill.

Among the close to 7 million jobs that could be added to the social sector industries examined here between now and 2018, the vast majority are well suited to encore career seekers. Our research shows that 3.5 million of these most promising encore career opportunities will be in health care and social assistance; 831,000 will be in local government; 750,000 will be in educational institutions; 399,000 will be in state government; and 319,000 will be in nonprofits, including religious and community organizations.

Specifically, we find there are 15 current job titles that will provide the most new encore career opportunities in the coming decade. They are shown here, with the projected increase in the number of jobs between now and 2018.

	Number (in thousands)
Primary, secondary and special education teachers	647.3
Registered nurses	581.5
Home health aides	460.9
Personal and home care aides	375.8
Nursing aides, orderlies and attendants	276.0
Medical assistants	163.9
Licensed practical and licensed vocational nurses	155.6
Business operations specialists	147.2
General and operations managers	143.2
Child care workers	142.1
Teacher assistants	134.9
Receptionists and information clerks	132.7
Medical and health service managers	100.8
Clergy	85.1
Social and human service assistants	79.4

As our analysis demonstrates, many of these jobs will go begging unless older workers move into them and make them their encore careers.

Conclusions

In the current economy, there are so many unemployed people that younger workers seem to be competing with older workers for available jobs. If the economy recovers, as employment projections predict it will, this competition will all but disappear. Instead of workers jockeying for jobs by enhancing their skills to gain the approval of employers, we may find that employers are forced to find ways to enhance their jobs to attract older workers to fill them.

Not only will there be jobs for these experienced workers to fill, but the nation will absolutely need older workers to step up and take them – to assure continued economic growth and to provide the critical social and government services on which we all depend.

We may find that employers are forced to find ways to enhance their jobs to attract older workers to fill them.

INTRODUCTION

With nearly 10 percent of the American labor force unemployed and another 7 percent so discouraged by their job prospects that they have either dropped out of the labor force altogether or are working at part-time jobs when they would prefer full-time employment, the current economic concern is unquestionably how to generate enough jobs to put America back to work.[1]

It therefore may come as something of a surprise that within less than a decade, the United States may face exactly the opposite problem – not enough workers to fill expected job openings.

This remarkable turn of events could occur as the baby boom generation reaches traditional retirement age. If this generation retires from the labor force at the same rate as current older workers, the baby bust generation that follows will likely be too small to fill more than a fraction of projected new jobs. Even when the "echo boomers" – the children of the boomers – hit the labor market, those 55 and older will still be the dominant age cohort. Between 2015 and 2030, the U.S. Census Bureau projects a total increase in the U.S. population of 47 million. The increase in the number of individuals 55 and older will be more than double the increase of those age 20 to 54 (an additional 25 million versus an additional 12 million).[2] If this shift in the age distribution to older Americans contributes to substantially reduced labor force participation, long-term economic output and real household income could suffer as jobs go unfilled.

To avoid this situation, many older workers will need to continue to work in their current jobs or in new ways and in new roles well past age 65. Fortunately, there is good reason to believe they will remain in the labor force for longer periods than in the past. The question, however, is whether currently projected labor force participation rates for older workers will be sufficient to fill the number of expected additional jobs needed to maintain healthy economic growth and meet growing social needs.

Many older workers will need to continue to work in their current jobs or in new ways and in new roles well past age 65.

Equally important is the question of how many older workers will be able to find jobs in a rapidly expanding social sector, where there will be millions of job opportunities in the health care industry, social services, education, government and a host of other fields where such workers can find rewarding encore careers that promote social well-being and social equity. Indeed, as our research demonstrates, nearly half (47 percent) of all the projected additional nonfarm payroll jobs generated by 2018 will be in the private social sector or in federal, state and local government – a proportion substantially greater than the 32 percent of all existing jobs in 2008. Put another way, how much of an infusion of boomer talent will we need if we are to avoid a shortfall in the labor market pool required to fill the critical jobs in these sectors of the economy?

Our analysis relies on the latest official forecasts of population growth, job growth and labor force participation by the U.S. Bureau of Labor Statistics (BLS) and the Census Bureau. The official BLS 10-year job growth forecasts released in December 2009 attempt to take into account the national economic recession that began in December 2007. In addition to looking at the job market across the total U.S. economy, this research examines a subset of jobs in health care and social assistance; educational services; nonprofits, including religious and community organizations; the performing arts; museums; libraries; and local, state and federal government – defined for this report as the social sector industries. Estimates of the number of jobs in specific occupations are based on the Labor Market Assessment Tool developed jointly by the Dukakis Center for Urban and Regional Policy at Northeastern University and the Research Division of the Boston Redevelopment Authority. (A detailed description of the methodology applied in conducting this analysis is presented in Appendix A.)

There will be millions of job opportunities in health care, social services, education, government and other fields where older workers can find encore careers.

Relying on these sources, this analysis estimates:

- The projected number of jobs that will be added to our overall economy between 2008 and 2018
- The projected number of jobs that will be added between 2008 and 2018 in social sector industries
- The projected labor force to fill these jobs if current labor force participation rates and immigration patterns are unchanged

By comparing projected job growth and labor force participation we then determine the resulting gap between them and discuss strategies that would narrow that gap.

ANALYSIS

By 2018, with an expected return to economic growth but no change in current labor force participation rates or immigration rates, there will likely be more jobs than people to fill them.

Between 1988 and 1998, total nonfarm payroll (wage and salary worker) employment in the United States increased by 1.9 percent per year – growing by 20.6 million to nearly 126 million.[3] During the following decade (1998-2008), job growth in this segment of the economy slowed to an annual 0.9 percent rate, in part reflecting the recession of 2001 and the much deeper economic crisis that began in 2007. By 2008, total nonfarm employment stood at 137.8 million.[4]

During the next decade (2008-2018), employment growth is projected to recover, but still expand at no more than 1 percent per year. Yet even at this relatively slow job creation pace, the total number of nonagricultural payroll jobs is projected to increase by 14.6 million to 152.4 million. This shift represents an overall increase by 2018 of nearly 11 percent with the overwhelming majority of these jobs (91 percent) in the private sector.[5]

In addition to the expanded number of payroll jobs, the number of self-employed and unpaid family workers in family-owned firms plus the number of farm workers is expected to grow by a little over 700,000. Adding together all wage and salary (payroll) workers; the self-employed; unpaid family workers in family-owned firms; and those who work on farms brings the projected total of all employed workers in 2018 to 166.2 million – an increase of 15.3 million over the 2008 total.[6]

TABLE 1 PROJECTED JOB GROWTH IN THE UNITED STATES 2008–2018 (IN THOUSANDS)

Sector	Total Employment 2008	Total Employment 2018	Net Job Growth 2008-2018	Percent Growth 2008-2018
Total nonagricultural wage and salary employment	**137,815**	**152,443**	**14,629**	**10.6**
Nonagricultural self-employed and unpaid family workers (including secondary jobs)	10,837	11,550	713	6.6
Total nonfarm employment	148,652	163,993	15,341	10.3
Total agricultural employment	2,280	2,212	-68	-3
Total employment (wage and salary plus self-employed – all sectors)	**150,932**	**166,206**	**15,274**	**10.1**

Source: Based on Bureau of Labor Statistics projections for 2008-2018

In sum, there could be as many as 14.6 million new nonfarm payroll jobs created between 2008 and 2018. Adding self-employed workers; family members at work in family businesses; and those in farming increases this total to 15.3 million.

Projected changes in the labor force based on current participation rates

Between 2008 and 2018, the Census Bureau projects that there will be 21.8 million additional adults in America who are 18 or older. This projection is based on expected mortality rates and on the assumption that there will be no major change in immigration. If the current overall labor force participation rate (66.2 percent) were to hold through 2018, there would be about 14.4 million additional workers in the economy – just about enough to fill the number of projected payroll jobs.

But the outcome is different if we look at age-specific labor force participation rates. Given the aging of the population and the fact that older workers tend to participate at much lower rates in the labor market, the overall labor force participation rate will fall during the next decade if age-specific labor force participation rates do not change.

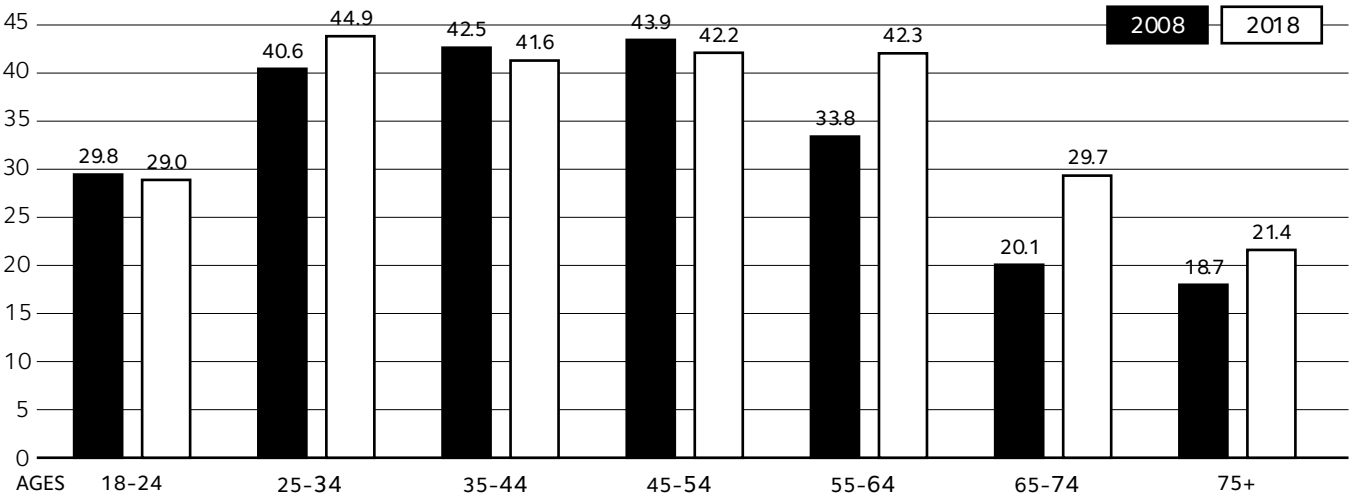
Table 2 and **Figure 1** provide data for the estimated adult population in 2008 and the projected population for 2018 by age group.

TABLE 2 ESTIMATED AND PROJECTED U.S. ADULT (AGE 18+) POPULATION 2008 AND 2018

Age Group	2008 Population	2018 Population	2008-2018 Change	2008-2018 % Change
18-24	29,755,591	29,028,968	-726,623	-2.4
25-34	40,629,764	44,916,805	4,287,041	10.6
35-44	42,453,514	41,604,194	-849,320	-2.0
45-54	43,936,566	42,174,794	-1,761,772	-4.0
55-64	33,768,556	42,348,017	8,579,461	25.4
65-74	20,135,091	29,703,488	9,568,397	47.5
75+	18,709,619	21,449,881	2,740,262	14.7
Total	**229,388,702**	**251,226,147**	**21,837,446**	**9.5**

Source: Census Bureau

FIGURE 1 ESTIMATED POPULATION BY AGE 2008–2018 (IN MILLIONS)



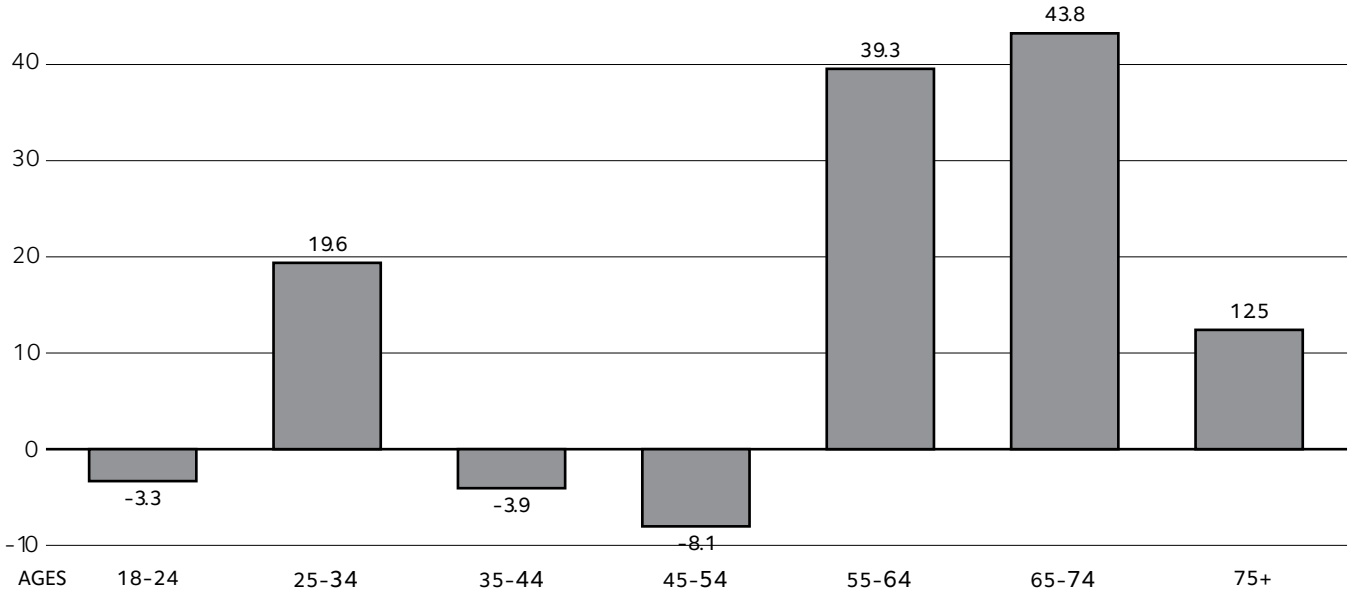
Source: Census Bureau

Looking beneath the overall projected growth of 21.8 million additional adults makes clear that it has little to do with "baby-bust" teenagers becoming adults and much more to do with the increased life span of older Americans and a continued population infusion from other countries. The numbers are quite remarkable:

- Less than 1 million (4.4 percent) of the additional adults will be younger than 55. The remaining 20.9 million will all be at least 55, with more than half (56 percent) of this number (12.3 million) aged 65 or older.
- The number of adults younger than 24 and between 35 and 54 is actually projected to decline, as there will be fewer children turning 18 and more 35- to 54-year-olds aging into the 55-plus category than younger adults entering the 25- to 34-year-old cohort.
- The only growth among those younger than 55 will be those who turn 25 to 34 during the decade, the so-called "echo boomers" – the children of the large boomer generation.
- With the boomer generation – 78 million people strong – turning 55 or older *and* living longer than past generations, there will be an increase of more than 25 percent in the number of those aged 55 to 64 and nearly a 48 percent increase in those 65 to 74. Even the number of adults older than 75 is projected to increase by nearly 15 percent as a result of longer life spans.

Figure 2 presents the projected share of added adults by age group for the 2008-2018 period. More than 96 percent of adult population growth will be among those aged 55 and older, and more than half (56 percent) will be among those 65 and older.

FIGURE 2 SHARE OF POPULATION GROWTH BY AGE 2008–2018 (IN PERCENT)



Source: Census Bureau

Such a dramatic change in the age structure of the population is important to the labor market because of the variance in labor force participation by age. **Table 3** provides the most recent data (2008) on labor force participation rates by age. The rates range from a high of 84.1 percent for those age 35 to 44 to just 7.3 percent for those 75 and over.

TABLE 3 LABOR FORCE PARTICIPATION RATES (LFPR) BY AGE COHORT 2008

Age Group	2008 LFPR (in percent)
18-24	59.2
25-34	83.3
35-44	84.1
45-54	81.9
55-64	64.5
65-74	25.1
75+	7.3
Total	66.2

Source: Bureau of Labor Statistics

If we apply these 2008 participation rates to the projected changes in the adult population by age cohort, the total increase in the labor force between 2008 and 2018 will amount to just 9.1 million. This is 5.5 million fewer labor force participants than the projected number of additional payroll jobs in the private and public nonagricultural sector, and it is 6.2 million fewer if we add in the projected number of additional self-employed, unpaid family workers and farmers.

Even if these labor force participants work an average of 1.054 jobs – the current number of jobs per worker as a result of some labor force participants working two or more jobs – the number of unfilled jobs would range from 5 million payroll jobs to 5.7 million total jobs.[7] Essentially, if there is no increase in labor force participation among those 55 and older, the expected supply of labor will fall short of the 2018 expected demand by a third or more.

In sum, given projected population growth and *current* labor force participation rates, assuming no major change in immigration, there will only be about 9.1 million additional workers to fill all positions. Even taking into account multiple job holders, the total number of jobs that could be filled at current labor force participation rates is 9.6 million, leaving anywhere from 5.0 to 5.7 million potential jobs vacant.

The impact of a labor shortage

A labor shortage of this magnitude, leaving as many as 30 to 40 percent of all projected additional jobs vacant, could have a significant impact on our economy and on the quality of life in our communities.

According to the Congressional Budget Office (CBO), nominal gross domestic product (GDP) by 2018 will be $20.3 trillion.[8] Using the CBO's inflation estimates, this translates into a real GDP of $18.1 trillion in 2008 dollars. With total projected employment of 166.2 million by 2018, the amount of GDP generated per worker will be $109,200.

Applying this average output per worker to the potential 5.7 million employment gap yields a potential loss in real GDP of $622 billion per year by 2018. This is essentially a loss of 3.4 percent of potential output each year. Over a five-year period, this could mean a total loss in output of more than $3 trillion. That is a great deal of potential output that we may

forego if labor force participation rates of older workers do not increase substantially above predicted levels (or if labor force participation rates do not rise for younger workers.)

Actual output is determined not solely by the number of workers employed, but by the average productivity of each worker (output per worker hour) and the number of hours worked per year by each worker. To the extent that older workers are generally a bit less productive (that is, produce less output per hour) than prime-age workers and less likely to work full time and year-round, even substantially higher labor force participation rates will not be sufficient to make up the full output gap.

A good proxy for output is median earnings. According to the latest survey of usual weekly earnings of full-time wage and salary workers (2009, third quarter), workers aged 16 to 64 have an estimated median weekly wage of $739; workers 65-plus earn a median wage of $691.[9] As such, the typical older full-time worker produces about 93.5 percent of the output of the typical worker aged 16 to 64. Moreover, the typical worker older than 65 works 30.3 hours per week, about 85 percent as much as the 35.8-hour average workweek of someone aged 16 to 64.

Not filling the potential number of jobs in the social sector will mean having too few workers to meet our needs for health care, education and community service.

The somewhat lower output per week of older full-time workers and their shorter workweek suggest that the typical older (65-plus) worker produces about 79 percent as much output per week as the typical worker younger than 65. Thus even if we were somehow to fill the full employment gap, we would likely still suffer something like a 2.7 percent decline in potential output each year – unless older workers were to become even more productive and choose to work longer hours.

Beyond the loss in total output, not filling the potential number of jobs in the social sector will mean having too few workers to meet our needs – discussed in the next section – for health care, education and community service of all kinds.

The projected labor shortage could limit the growth of the social sector, affecting critical services, including health care, social assistance, education and government.

To understand the implications of an anticipated gap for key jobs that serve our communities, this research has separately analyzed jobs in health care and social assistance; educational services; nonprofit community and religious organizations; the performing arts; museums; libraries; and local, state and federal government. For the purposes of this paper, this portion of the economy is defined as the "social sector." Because jobs outside these industries, and therefore beyond the scope of our analysis – for example in the green economy – can also be considered part of the social sector, these implications are, if anything, understated.

Bureau of Labor Statistics data show that between now and 2018 there could be 6.9 million new jobs created in these social sector industries. This growth is faster than total employment – 47 percent of all projected job growth between 2008 and 2018, compared with 32 percent of current jobs. More than 5.2 million of these new jobs will be in private social sector industries with another 1.7 million jobs in local, state and federal government agencies. In sum, job growth in the social sector is expected to be faster than for jobs overall.

TABLE 4 SOCIAL SECTOR INDUSTRY JOB GROWTH PROJECTIONS 2008–2018 (IN THOUSANDS)

Wage And Salary Employment	Total Employment 2008	Total Employment 2018	Net Job Growth 2008-2018
Health care and social assistance	15,819	19,816	3,997
Educational services	3,037	3,842	806
Nonprofits	2,973	3,353	379
Performing arts	118	127	9
Museums	132	161	29
Libraries	30	35	5
Total private social sector	22,109	27,333	5,224
Federal government	2,764	2,859	95
State government	5,178	5,624	446
Local government	14,557	15,703	1,146
Total government	22,499	24,186	1,687
Total social sector	**44,608**	**51,519**	**6,911**
Total private nonfarm employment	**115,316**	**128,257**	**12,941**
Total nonfarm wage and salary employment	137,815	152,443	**14,629**
Total employment (wage and salary plus self-employed – all sectors including agricultural)	**150,932**	**166,206**	**15,274**
Social sector as percent of total nonfarm wage and salary employment	32.4%	33.8%	47.2%

Source: Bureau of Labor Statistics, Labor Market Assessment Tool

If the expected additional labor force participants (based on projected population growth, as discussed above) distribute themselves between social sector jobs and the rest of the economy in the same proportion as the number of projected new jobs, applying *current* labor force participation rates and assuming no major change in immigration, an estimated 4.3 million additional workers can be expected to fill the expected 6.9 million new social sector positions.

Taking into account multiple job holders, the total number of jobs that would be filled is 4.5 million.

This would leave anywhere from 2.4 million to 2.6 million new jobs in the social sector unfilled out of a projected 2018 total of 51.5 million.

Expected increases in the labor force participation of the largest growing age cohort, people 55 and older, narrow the gap.

Fortunately for the labor market, boomers are not expected to retire at anywhere near the same rate as earlier cohorts of older workers. To be sure, workers currently report they intend to officially retire by about age 62, down from age 67 in 1950-1955 for men and nearly age 68 for women. But research from the Employee Benefit Research Institute reveals that as of 2008, 38 percent of workers aged 55-plus expect to retire at 66 or older, and 8 percent do not expect to ever retire. This figure is up from 12 percent and 6 percent, respectively, in 1998.[10]

Moreover, as average life expectancy has been rising, these retirees now have a much longer time to live after the official end of their careers. Men are expected to live nearly 19 years past retirement, while women will live nearly 22 years past that event. (See **Table 5**.)

TABLE 5 RETIREMENT AGE AND LENGTH OF RETIREMENT

	Estimated Average Age of Retirement from Labor Force	Expected Years of Post-Work Retirement
MEN		
1950-1955	66.9	12.0
1985-1990	62.6	16.3
1990-1995	62.4	17.2
1995-2000	62.0	18.0
2000-2005	61.6	19.0
2005-2010	61.6	18.6
WOMEN		
1950-1955	67.6	13.6
1985-1990	62.8	20.3
1990-1995	62.6	21.1
1995-2000	61.4	22.0
2000-2005	60.5	23.1
2005-2010	62.0	21.6

Source: Murray Gendell, "Older Workers: Increasing their Labor Force Participation and Hours of Work," Monthly Labor Review, *January 2008, Table 1.*

Although they may retire from their regular jobs, many people are healthy and active and do not intend to retire from the labor force altogether any time soon. According to the New Retirement Surveys conducted for Merrill Lynch by Harris Interactive in 2005 and 2006, 71 percent of boomers plan on working, at least part time, for an average of nine years post-retirement. Half of these boomers "do not plan to ever stop working completely."[11]

When they do work, those 65 and older tend more often to work part time. But the proportion of older workers who work full time is surprisingly high. In 2008, nearly seven out of eight working adults aged 55 to 59 (86.3 percent) were employed full time – 35 hours or more per week. For those aged 60 to 64, the full-time proportion was still nearly 79 percent. For those aged 65 to 74, three out of five (60.1 percent) of those who were working were working full time, along with 42 percent of those aged 75 to 84.[12] Overall, 57 percent of all workers over the age of 65 were working full time in 2008. Translated into hours of work, those age 16 to 64 worked an average workweek of 35.8 hours; those 65 and above worked an average of 30.3 hours.

The U.S. Department of Labor has taken all of these data into account in its latest projections of labor force participation. According to these estimates, the labor force participation rate of younger adults will continue to decline as more of them attend college and graduate school and undertake professional studies. There will even be slight declines in participation among those aged 25 to 54.

In contrast, large increases in labor force participation are expected to occur among those 55 and older, with 55- to 64-year-olds increasing their participation rate from 64.5 to 68.1 percent between 2008 and 2018. Those aged 65 to 74 are expected to increase theirs from 25.1 to 30.5 percent; while those aged 75-plus are projected to increase theirs from 7.3 to 10.3 percent. (See **Table 6**.)

These increases represent a continuing revolution in work force participation, with 55- to 64-year-olds increasing their participation from just over half (54.6 percent) in 1988 to more than two-thirds (68.1 percent) by 2018; those 65 to 74 nearly doubling their participation from 16.1 to 30.5 percent; and more than one in 10 of those over age 75 remaining in the labor force, up from just one in 14. (See **Figure 3**.)

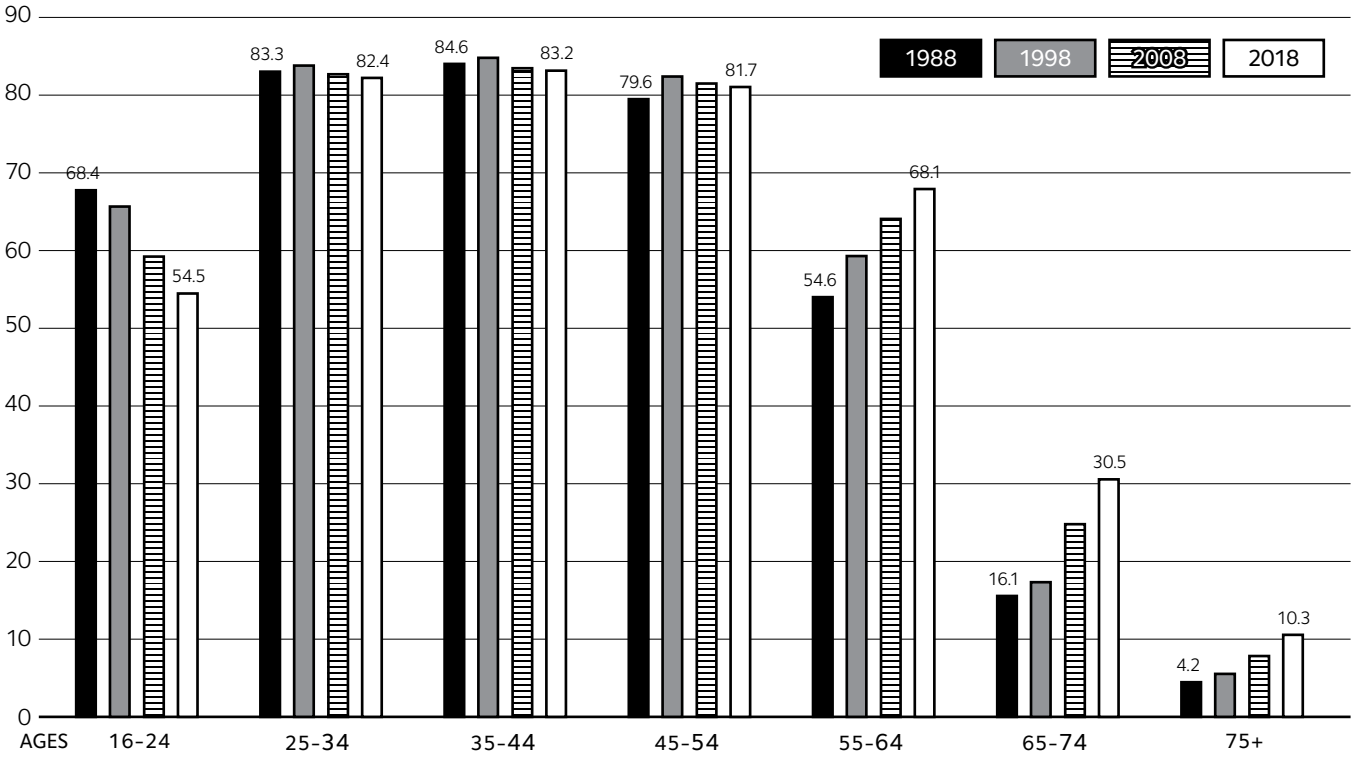
The higher expected participation rates for those age 55 and older, along with the larger number in these cohorts, can be expected to add 3.8 million to the labor force. If these were the only age cohorts experiencing a change in labor force participation, this additional labor force would reduce the payroll employment gap from 5.5 million to only 1.7 million.

TABLE 6 LABOR FORCE PARTICIPATION RATES (LFPR) BY AGE 2008 AND 2018

Age Group	2008 LFPR (in percent)	2018 LFPR (in percent)
16-24	58.8	54.5
25-34	83.3	82.4
35-44	84.1	83.2
45-54	81.9	81.7
55-64	64.5	68.1
65-74	25.1	30.5
75+	7.3	10.3
Total	66	64.5

Source: Mitra Toosi, "Labor Force Projections to 2018: Older Workers Staying More Active," Monthly Labor Review, *November 2009, Table 3, p. 37.*

FIGURE 3 LABOR FORCE PARTICIPATION RATES BY AGE 1988–2018 (IN PERCENT)



Source: Mitra Toosi, "Labor Force Projections to 2018: Older Workers Staying More Active," Monthly Labor Review, *November 2009, Table 3, p. 37.*

However, according to these projections, the combination of smaller age cohorts for those under age 55 and generally *falling* participation rates for these younger age groups could reduce the 2018 work force by 2.2 million, leaving an overall net increase of just 1.6 million. Even accounting for an average of 1.054 jobs per worker, the total gap filled by additional population is just 1.7 million – leaving an overall payroll employment gap of 3.8 million and a total employment gap of 4.5 million, when you include self-employed workers, workers in family businesses and farm workers.

Looking at the subset of social sector industries examined above, these changes in labor force participation rates mean that the social sector work force would increase by 5.4 million, accounting for an average of 1.054 jobs per worker. This increase still leaves a gap of 1.8 million social sector jobs that could remain unfilled if current projected labor force participation rates hold true.

If adults 55 and older work at rates somewhat higher than even expected, the projected need for social sector workers could be fully met.

This gap in filling social sector jobs could be closed if the participation of adults 55 and older in these jobs increases to higher rates than official projections. For example, if more than three-quarters (77 percent) of the projected additional 55-plus workers are employed in social sector industries, the full 6.9 million new jobs would be filled. To illustrate how this situation could be achieved:

- Given our estimate that there will be approximately 2.7 million additional individuals 75 or older living in the United States by 2018, and given the Bureau of Labor Statistics-projected age-specific labor force participation rate for that year, for that cohort (10.3 percent), there will be 282,000 workers age 75-plus added to the U.S. labor force between 2008 and 2018. If most of these workers were to choose jobs in the social sector, about 5 percent of the employment opportunities in these industries would be satisfied.

- Adding the entire cohort of 65- to 74-year-olds would close more of the social sector employment gap. If they were to choose this sector, this move would fill another 2.9 million such jobs. That still leaves 3.7 million (6.9 million minus 3.2 million) of these projected jobs unfilled.

- The rest could be filled by the 55- to 64-year-old cohort. According to our estimates, there will be 5.8 million more workers of this age available by 2018. If about half (47 percent) of these workers were to choose jobs in this sector, the entire employment gap could be filled.

But under this illustration, millions of jobs outside the social sector would go begging. Remember that more than half (53 percent) of all the projected new jobs between 2008 and 2018 are found outside the social sector industries (7.7 million). By our calculations, there will be a net increase of only about 1 million workers age 18 to 64 during this period. The combination of 1 million younger workers plus the 2.1 million older

workers who choose work outside the social sector still leaves 4.6 million jobs in the rest of the economy unfilled. We will have fulfilled our need for social sector employees, but the rest of the economy would suffer: construction; finance, insurance and real estate services; wholesale and retail trade; and professional business services. This situation would mean that we obtain the full set of social and government services we may need and want, but will have to forego some of the output that we might otherwise obtain from the private nonsocial sector.

From a traditional economics perspective, we will have arrived at full employment with total output constrained only by the amount people willing to work. From a utility perspective, workers will be trading off more goods and services for more leisure. If this is freely done, we can say that we have arrived at an optimal state of affairs even if we could have increased our consumption of material goods by working harder or longer. This tradeoff may be precisely what the world needs – more socially useful output, more socially useful work and a little less production of most everything else.

But if we wanted as a society to produce all the goods and services consistent with the full employment projection for 2018, the *overall* labor force participation rate would need to increase beyond the 2018 projections back to the rate of 2008: 66.1 percent. Unless the rates for workers younger than 55 were to increase to reach this goal, the rates for those 55 and older would have to increase significantly.

One scenario for filling the entire employment gap would see both:

- raising the labor force participation rate for 55- to 64-year-olds to 74.4 percent, more than 6 percentage points higher than the Bureau of Labor Statistics-projected 2018 rate and 10 percentage points higher than the current 2008 rate, plus
- raising the rate for 65- to 74-year-olds to 33.3 percent from the Bureau of Labor Statistics-projected 2018 rate of 30.5 percent (and the current rate of 25.1 percent) while boosting the rate for those 75 and older to 12.4 percent. (See **Table 7**.)

TABLE 7 PROJECTED LABOR FORCE PARTICIPATION RATES (LFPR) REQUIRED TO FILL THE PROJECTED 2018 TOTAL EMPLOYMENT GAP (IN PERCENT)

Age Group	2008 LFPR	Current Projected 2018 LFPR	2018 LFPR Needed to Fill Total Employment Gap
16-24	58.8	54.5	54.5
25-34	83.3	82.4	82.4
35-44	84.1	83.2	83.2
45-54	81.9	81.7	81.7
55-64	64.5	68.1	74.4
65-74	25.1	30.5	33.3
75+	7.3	10.3	12.4
Total	66	64.5	66.1

Source: Authors' calculations[13]

These rates are not impossible given the improved health and lowered morbidity of older Americans, but participation rates at these elevated rates would fundamentally change America's employment landscape.[14]

Providing opportunities for older adults to work in the kinds of social sector jobs they say they want will increase the likelihood that they will work longer and help close the employment gap.

Instead of workers jockeying for jobs by enhancing their skills to gain the approval of employers, this analysis indicates that by 2018 employers will need to find ways to enhance their jobs to attract workers to fill them. The good news is that attracting adults 55 and older to social sector jobs matches the interest expressed in these jobs in surveys about encore careers.

Boomers are looking for a retirement that allows them to balance work, play and learning in flexible jobs in new and different industries. In Merrill Lynch's New Retirement Survey, two-thirds of all adults who plan on working into their retirement would like to change their line of work. Additionally, according to the MetLife Foundation/Civic Ventures Encore Career Survey (2008) done by Peter D. Hart Research Associates, half of Americans age 44 to 70 are interested in new jobs that contribute to improving the quality of life in their communities.[15] Two-thirds of those interested in encore careers – which combine continued income with personal meaning and social impact – say they are motivated by a desire to use their skills and experience to help others. Their top dream jobs include working to advocate for an issue in which they believe, working with children and youth and working to preserve the environment. These jobs are largely (though not exclusively) in the social sector industries examined in this report. This portion of the economy is devoted to meeting the social needs of households in their own neighborhoods.

The big question therefore is not simply whether there will be enough jobs for older workers but whether the work will be rewarding enough, both economically and socially, to keep them in the labor force. As we will see, harkening back to our employment gap analysis, there will not only be jobs available in the social sector that can fulfill older workers' desire for meaningful work, but potentially there will be so many of them that it will take nearly 60 percent of the projected increase in older workers to fill the available jobs. Not only will there be many jobs for encore career seekers to fill, but the nation will absolutely need these workers to step up to take them – to assure continued economic growth and to provide the critical social and government services on which we all depend.

Among the close to 7 million new jobs that will be added to the social sector between now and 2018, the vast majority are well suited to encore career seekers.

Few of these jobs require heavy physical work as a primary attribute. Many could lead experienced workers to carry their existing skills and credentials into new settings – such as a registered nurse who moves from a major hospital to working in a community clinic; a computer systems analyst who moves from a private software company to take a job in local government; a civil engineer who moves from a private construction firm to work on a state government highway project.

To discover the most promising encore career opportunities within the total number of expected 6.9 million additional social sector jobs, we eliminated jobs that are primarily heavily physical. (See Appendix A on methodology.) This elimination reduces the total number from 6.9 million to 5.9 million. (See **Table 8**.)

TABLE 8 SOCIAL SECTOR INDUSTRY JOB GROWTH FOR MOST PROMISING ENCORE CAREER OPPORTUNITIES 2008–2018 (IN THOUSANDS)

Wage and Salary Employment	Total Employment 2008	Total Employment 2018	Net Job Growth 2008-2018	Total Less Physically-Demanding Employment 2008	Total Less Physically-Demanding Employment 2018	Net Less Physically-Demanding Job Growth 2008-2018
Healthcare and social assistance	15,819	19,816	3,997	13,892	17,402	3,510
Educational services	3,037	3,842	806	2,829	3,579	750
Nonprofits	2,973	3,353	379	2,576	2,895	319
Performing arts	118	127	9	85	109	24
Museums	132	161	29	112	134	22
Libraries	30	35	5	28	32	4
Total private social sector	**22,109**	**27,333**	**5,224**	**19,522**	**24,151**	**4,629**
Federal government	2,764	2,859	95	2,411	2,486	75
State government	5,178	5,624	446	4,376	4,775	399
Local government	14,557	15,703	1,146	11,472	12,303	831
Total government	**22,499**	**24,186**	**1,687**	**18,259**	**19,564**	**1,305**
Total social sector	**44,608**	**51,519**	**6,911**	**37,781**	**43,715**	**5,934**

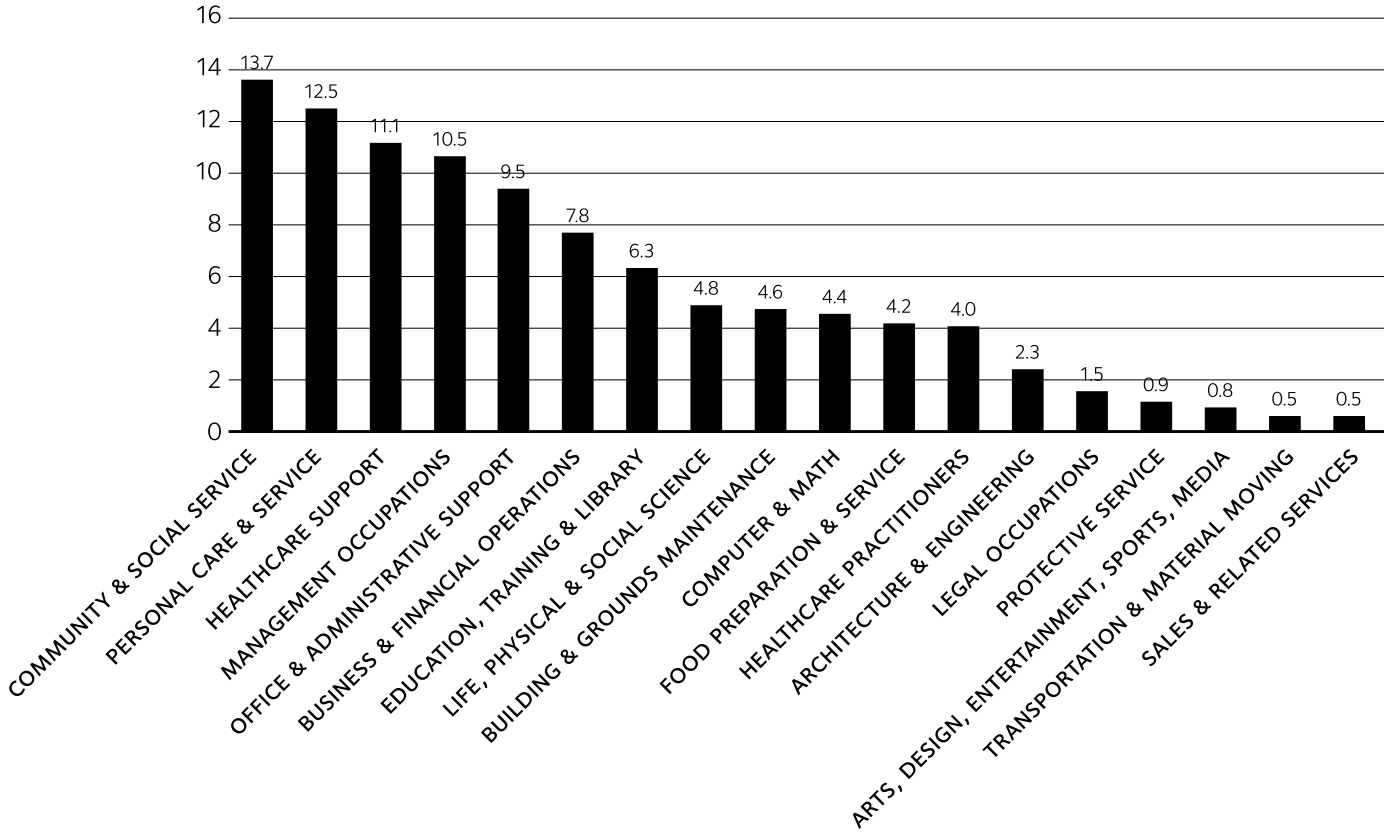
Source: Bureau of Labor Statistics, Labor Market Assessment Tool

Looked at by industry, 3.5 million of these most promising encore career opportunities will be in health care and social assistance; 831,000 will be in local government; 750,000 will be in educational institutions; 399,000 will be in state government; and 319,000 will be in nonprofits, including religious and community organizations.

While there are about 600 occupations that do not require primarily heavy physical effort, a small number of occupation clusters account for a large share of jobs in the social sector. **Figure 4** reveals "clusters" of jobs, with each covering a set of closely-related industries and occupations. According to this breakdown, the "community and social service" job cluster is responsible for 14 percent of such employment. Personal care jobs across all of the industry sectors in the social sector and government are responsible for another 12.5 percent of the total, with health care support positions accounting for 11 percent.

About one in nine (11 percent) of all the projected new social sector jobs will be filled by managers with nearly another one in 10 (9.5 percent) filled by workers who will provide office and administrative support. Business and financial operations personnel and education, training and library workers account for the other broad occupations that will each account for more than 5 percent of expected job growth in the social sector.

FIGURE 4 SOCIAL SECTOR JOB CLUSTERS PROJECTED JOB GROWTH (IN PERCENT) 2008–2018



The top 30 occupations in the social sector that will provide the most encore career opportunities are shown in **Table 9**.[16] According to this analysis, the two social sector occupations where there will be the largest number of new jobs are primary, secondary and special education teachers (647,300) and registered nurses (581,000), followed by home health aides (460,900); personal and home care aides (375,800); nursing aides, orderlies and attendants (276,000); and medical assistants (163,900). Other occupations experiencing a growth of at least 100,000 jobs are: licensed practical

and licensed vocational nurses; business operations specialists in the social sector; general and operations managers in this sector; child care workers; receptionists and information clerks; teacher assistants; and medical and health service managers.

TABLE 9 TOTAL SOCIAL/GOVERNMENT SECTOR – PROJECTED ENCORE CAREER JOB GROWTH 2008–2018 (IN THOUSANDS)

	Number
Primary, secondary and special education teachers	647.3
Registered nurses	581.5
Home health aides	460.9
Personal and home care aides	375.8
Nursing aides, orderlies and attendants	276.0
Medical assistants	163.9
Licensed practical and licensed vocational nurses	155.6
Business operations specialists	147.2
General and operations managers	143.2
Child care workers	142.1
Teacher assistants	134.9
Receptionists and information clerks	132.7
Medical and health service managers	100.8
Clergy	85.1
Social and human service assistants	79.4
Maids and housekeeping cleaners	78.6
Educational, vocational and school counselors	73.3
Computer support specialists	64.0
Office clerks, general	60.8
Managers, all other	57.6
Social and community service managers	57.0
Mental health and substance abuse social workers	56.4
Accountants and auditors	55.6
Rehabilitation counselors	54.2
Medical and public health social workers	53.9
Bookkeeping, accounting and auditing clerks	52.3
Administrative services managers	52.2
Lawyers	52.0
Computer systems analysts	50.1
Human resources, training and labor relations specialists	49.1
Cooks, institution and cafeteria	48.5

Source: Lacey and Wright, "Occupational Employment Projections to 2018," Analysis of Labor Market Assessment Tool

Conclusion

This research provides a first cut at understanding the demographic changes that we will likely experience, along with expected changes in the U.S. work force, through 2018.

Using history as our guide, we believe the economy will recover. When it does, given the population dynamics of the very near future, it's clear that older adults will need to participate in the work force in numbers considerably larger than they do now or the nation will be unable to fill millions of jobs between now and 2018.

Future research will be needed to better understand:

- What types of jobs would best tap older workers' skills and talents
- What types of jobs would encourage older workers to remain in the labor force
- What types of training and mentoring older adults will need to gain entry to and proficiency in these jobs
- How jobs in the social sector can be restructured to take full advantage of the talents of a new, but experienced, work force
- What kinds of new jobs – not yet distinctly accounted for in official labor statistics – might be created to both meet critical social needs and appeal to experienced workers who want encore careers
- What policy changes can promote larger numbers of older adults moving into new or existing categories of social sector jobs

In the not-too-distant future, a much larger percentage of our work force will be over 55. These workers, if trained and strategically deployed, could, as Marc Freedman writes in *Encore*, "function as the backbone of education, health care, nonprofits, the government and other sectors essential to national well-being."[17] And we, as a society, could gain a new work force well suited to provide many of the social and public services on which we rely.

Appendix A: Methodology

The social sector is defined in this research to include both private and public enterprise that exhibits a social purpose. More specifically, it is composed of private nonprofits, government service and businesses with social missions. Using the official North American Industry Classification System, we have defined the social sector of the U.S. economy to encompass the following industries:

- Health care and social assistance
- Educational services
- Religious, grant-making, civic, professional and similar organizations (nonprofits)
- Performing arts
- Museums
- Libraries

In addition, because many similar social sector activities are carried out by government agencies, we have included in this analysis federal, state and local government.

See Appendix B for a complete listing of the workplaces where the social sector occupations examined in this report can be found, along with the 23 major occupation groups categorized by the U.S. Department of Labor in the Standard Occupation Classification system.

The 2008 employment level and 10-year projected growth for each of the occupations in each of these private and governmental industries has been estimated using U.S. Bureau of Labor Statistics occupation projections, which are included in the Labor Market Assessment Tool. Altogether, the assessment tool keeps track of 821 detailed occupations across all industry sectors.

We have used a conservative definition of "most promising" encore career opportunities, eliminating jobs that require a significant amount of physical strength and stamina. While many older workers are still hale and hearty and can perform such jobs, we have excluded them in our estimates of the number of social sector and government jobs that qualify as most promising encore career opportunities.

Using a scale of physical demands developed for the Labor Market Assessment Tool from data available from the Bureau of Labor Statistics' O*Net occupation descriptions, we inspected all occupations that scored in the top 30th percentile on physical demands. Excluding these 222 "physically demanding" occupations left 599 discrete occupations that can be performed with reasonable physical effort.

Among the most physically demanding jobs are those for dancers; fitness trainers and aerobics instructors; choreographers; structural iron and steel workers; athletes and sports competitors; carpet installers; firefighters; mobile home installers; tree fallers; roofers; oil and gas derrick operators; reinforcing iron and rebar workers; installation, maintenance and repair worker helpers; carpenters; stonemasons; and mining roof bolters. Clearly, many of these are jobs that only some older workers can still perform. In other cases (choreographer, for example), one can imagine older workers being able to engage in such work if they have the appropriate skills and are in good health.

Close inspection of the list of 222 excluded physically demanding occupations uncovered 17 that represent fields that employ a substantial number of workers (such as registered nurses, home health aides and security guards) and that contain functions that many older workers could perform.[18] In the final analysis, we added these 17 occupations to the 599 that passed the 30 percent physical demands test. Thus, for the purpose of this research, the total number of occupations covered in the analysis of the most promising social and government sectors includes 616 occupations.

Appendix B

The following is a complete listing of the workplaces where the social sector occupations examined in this report can be found, followed by a list of the 23 major occupation groups categorized by the U.S. Department of Labor in the Standard Occupation Classification System.[19]

Health Care and Social Assistance

62 Health Care and Social Assistance

621 Ambulatory Health Care Services

6211 Offices of Physicians

621111 Offices of Physicians (except Mental Health Specialists)

621112 Offices of Physicians, Mental Health Specialists

6212 Offices of Dentists

6213 Offices of Other Health Practitioners

62131 Offices of Chiropractors

62132 Offices of Optometrists

62133 Offices of Mental Health Practitioners (except Physicians)

62134 Offices of Physical, Occupational and Speech Therapists and Audiologists

62139 Offices of All Other Health Practitioners

621391 Offices of Podiatrists

621399 Offices of All Other Miscellaneous Health Practitioners

6214 Outpatient Care Centers

62141 Family Planning Centers

62142 Outpatient Mental Health and Substance Abuse Centers

62149 Other Outpatient Care Centers

621491 HMO Medical Centers

621492 Kidney Dialysis Centers

621493 Free-Standing Ambulatory Surgical and Emergency Centers

621498 All Other Outpatient Care Centers

6215 Medical and Diagnostic Laboratories

621511 Medical Laboratories

621512 Diagnostic Imaging Centers

6216 Home Health Care Services

6219 Other Ambulatory Health Care Services

62191 Ambulance Services

62199 All Other Ambulatory Health Care Services

621991 Blood and Organ Banks

621999 All Other Miscellaneous Ambulatory Health Care Services

6221 General Medical and Surgical Hospitals

6222 Psychiatric and Substance Abuse Hospitals

6223 Specialty (except Psychiatric and Substance Abuse) Hospitals

623 Nursing and Residential Care Facilities

6232 Residential Mental Retardation, Mental Health and Substance Abuse Facilities

62322 Residential Mental Health and Substance Abuse Facilities

6233 Community Care Facilities for the Elderly

623311 Continuing Care Retirement Communities

623312 Homes for the Elderly

6239 Other Residential Care Facilities

624 Social Assistance

6241 Individual and Family Services

62411 Child and Youth Services

62412 Services for the Elderly and Persons with Disabilities

62419 Other Individual and Family Services

6242 Community Food and Housing, Emergency and Other Relief Services

62421 Community Food Services

62422 Community Housing Services

624221 Temporary Shelters

624229 Other Community Housing Services

62423 Emergency and Other Relief Services

6243 Vocational Rehabilitation Services

6244 Child Day Care Services

Education Services

61 Educational Services

6111 Elementary and Secondary Schools

6112 Junior Colleges

6113 Colleges, Universities and Professional Schools

6114 Business Schools and Computer and Management Training

61141 Business and Secretarial Schools

61142 Computer Training

61143 Professional and Management Development Training

6115 Technical and Trade Schools

611511 Cosmetology and Barber Schools

611512 Flight Training

611513 Apprenticeship Training

611519 Other Technical and Trade Schools

6116 Other Schools and Instruction

61161 Fine Arts Schools

61162 Sports and Recreation Instruction

61163 Language Schools

61169 All Other Schools and Instruction

611691 Exam Preparation and Tutoring

611692 Automobile Driving Schools

611699 All Other Miscellaneous Schools and Instruction

6117 Educational Support Services

Nonprofit Institutions

813 Religious, Grantmaking, Civic, Professional and Similar Organizations

8131 Religious Organizations

8132 Grant Making and Giving Services

813211 Grant Making Foundations

813212 Voluntary Health Organizations

813219 Other Grant Making and Giving Services

8133 Social Advocacy Organizations

813311 Human Rights Organizations

813312 Environment, Conservation and Wildlife Organizations

813319 Other Social Advocacy Organizations

8134 Civic and Social Organizations

Performing Arts

711 Performing Arts, Spectator Sports and Related Industries

7111 Performing Arts Companies

71111 Theater Companies and Dinner Theaters

71112 Dance Companies

71113 Musical Groups and Artists

71119 Other Performing Arts Companies

7112 Spectator Sports

711211 Sports Teams and Clubs

711212 Racetracks

711219 Other Spectator Sports

7113 Promoters of Performing Arts, Sports and Similar Events

7114 Agents and Managers for Artists, Athletes, Entertainers and Other Public Figures

7115 Independent Artists, Writers and Performers

7131 Amusement Parks and Arcades

71312 Amusement Arcades

7132 Gambling Industries

71321 Casinos (except Casino Hotels)

71329 Other Gambling Industries

7139 Other Amusement and Recreation Industries

71391 Golf Courses and Country Clubs

71392 Skiing Facilities

71393 Marinas

71394 Fitness and Recreational Sports Centers

71395 Bowling Centers

71399 All Other Amusement and Recreation Industries

Museums

712 Museums, Historical Sites, and Similar Institutions

71211 Museums

71212 Historical Sites

71213 Zoos and Botanical Gardens

71219 Nature Parks and Other Similar Institutions

Libraries

512120 Film **Libraries**, commercial distribution

512120 Motion Picture Film **Libraries**

512199 Film **Libraries**, motion picture or video, stock footage

512199 **Libraries**, motion picture stock footage film

512199 **Libraries**, videotape, stock footage

512199 Motion Picture Film **Libraries**, stock footage

512199 Stock Footage Film **Libraries**

512199 Videotape **Libraries**, stock footage

519120 Circulating **Libraries**

519120 Lending **Libraries**

519120 **Libraries** (except motion picture stock footage, motion picture commercial distribution)

519120 Motion Picture Film **Libraries**, archives

519120 Reference **Libraries**

Public Administration – Federal, State and Local Government

92 Public Administration

921 Executive, Legislative and Other General Government Support

92111 Executive Offices

92112 Legislative Bodies

92113 Public Finance Activities

92114 Executive and Legislative Offices, Combined

92115 American Indian and Alaska Native Tribal Governments

92119 Other General Government Support

922 Justice, Public Order and Safety Activities

92211 Courts

92212 Police Protection

92213 Legal Counsel and Prosecution

92214 Correctional Institutions

92215 Parole Offices and Probation Offices

92216 Fire Protection

92219 Other Justice, Public Order and Safety Activities

923 Administration of Human Resource Programs

92311 Administration of Education Programs

92312 Administration of Public Health Programs

92313 Administration of Human Resource Programs (except Education, Public Health and Veterans Affairs Programs)

92314 Administration of Veterans Affairs

924 Administration of Environmental Quality Programs

92411 Administration of Air and Water Resource and Solid Waste Management Programs

92412 Administration of Conservation Programs

925 Administration of Housing Programs, Urban Planning and Community Development

92511 Administration of Housing Programs

92512 Administration of Urban Planning and Community and Rural Development

926 Administration of Economic Programs

92611 Administration of General Economic Programs

926120 Regulation and Administration of Transportation Programs

92613 Regulation and Administration of Communications, Electric, Gas and Other Utilities

92614 Regulation of Agricultural Marketing and Commodities

92615 Regulation, Licensing and Inspection of Miscellaneous Commercial Sectors

927 Space Research and Technology

928 National Security and International Affairs

92811 National Security

92812 International Affairs

Standard Occupational Classification: 23 Major Groups

11-0000 Management Occupations

13-0000 Business and Financial Operations Occupations

15-0000 Computer and Mathematical Occupations

17-0000 Architecture and Engineering Occupations

19-0000 Life, Physical and Social Science Occupations

21-0000 Community and Social Services Occupations

23-0000 Legal Occupations

25-0000 Education, Training and Library Occupations

27-0000 Arts, Design, Entertainment, Sports and Media Occupations

29-0000 Health Care Practitioners and Technical Occupations

31-0000 Health Care Support Occupations

33-0000 Protective Service Occupations

35-0000 Food Preparation and Serving Related Occupations

37-0000 Building and Grounds Cleaning and Maintenance Occupations

39-0000 Personal Care and Service Occupations

41-0000 Sales and Related Occupations

43-0000 Office and Administrative Support Occupations

45-0000 Farming, Fishing and Forestry Occupations

47-0000 Construction and Extraction Occupations

49-0000 Installation, Maintenance and Repair Occupations

51-0000 Production Occupations

53-0000 Transportation and Material Moving Occupations

55-0000 Military Specific Occupations

Notes

1. U.S. Department of Labor, Bureau of Labor Statistics, "Economic Situation Summary," November 6, 2009.

2. U.S. Census Bureau, *U.S. Population Projections, National Population Projections, Released 2008 based on Census 2000*, Table 12. "Projections of the Population by Age and Sex for the United States: 2010 to 2050."

3. Betty W. Su, "The U.S. Economy to 2016: Slower Growth as Boomers begin to Retire," *Monthly Labor Review*, November 2007.

4. In addition to the 137.8 million nonfarm payroll jobs in 2008, there were 10.8 million nonagricultural self-employed workers and approximately 2.3 million people working on farms. As such, total overall employment was nearly 151 million.

5. In the latest Bureau of Labor Statistics research released in December 2009, overall 10-year employment projections for nonagricultural payroll employment have been reduced slightly as a result of taking into account the recession that began in December 2007. The original employment projection for 2007-2017 had employment growing by 14.9 million. The new forecast has downgraded the total job growth to 14.6 million for the 2008-2018 period.

6. T. Alan Lacey and Benjamin Wright, "Occupational Employment Projections to 2018," *Monthly Labor Review*, November 2009.

7. U.S. Bureau of Labor Statistics, *Economic News Release*, Table A-13. Persons not in the Labor Force and Multiple Jobholders by Sex, not Seasonally Adjusted, December 4, 2009. The proportion of total workers working multiple jobs is 5.2 percent according to this report. Given that a small percentage of multiple jobholders have more than two jobs, we adjusted this figure up slightly to 5.4 percent to account for the estimated ratio of total number of jobs to total number of workers.

8. Congressional Budget Office, *A Preliminary Analysis of the President's Budget and an Update of CBO's Budget and Economic Outlook*, March 2009, Appendix A, "CBO's Economic Projections for 2009 to 2019."

9. U.S. Bureau of Labor Statistics News Release, "Usual Weekly Earnings of Wage and Salary Workers Third Quarter 2009," Table 2 "Median Usual Weekly Earnings of Full-Time Wage and Salary Workers by Age, Race, Hispanic or Latino Ethnicity and Sex," Third Quarter 2009 Averages, Not Seasonally Adjusted, October 16, 2009.

10. Employee Benefit Research Institute, "Expected Age of Retirement ... and Working in Retirement," FFE #86, June 11, 2008.

11. Merrill Lynch, The 2006 Merrill Lynch New Retirement Study: A Perspective from Individuals and Employers, 2006.

12. U.S. Census Bureau, *Current Population Survey, Annual Social and Economic Supplement, 2008*, Table 18. "Full-Time and Part-Time Status of the Civilian Employed Population 55 Years and Over by Sex and Age: 2008," June 2009.

13. These calculations also assume that in 2018 the overall unemployment rate will be 5.0 percent, roughly what economists consider to be a "full employment" unemployment rate where the only ones unemployed are those who are on temporary layoff or in the process of looking for and switching to new jobs.

14. Filling the output gap would require even higher labor force participation rates. If the productivity and hours worked of workers over age 65 do not increase to match those of younger workers, the overall labor force participation rate would have to increase to 66.9 percent. Simulating this increase by age cohort suggests that the labor force participation rates of those 55 to 64 would need to increase to 78.1 percent, a full 10 percentage points higher than the official 2018 estimate. For those 65 to 74, the rate would have to rise to 35.0 percent, 4.5 percentage points higher than the official 2018 estimate. For those older than 75, the rate would have to increase to 13 percent, another 0.6 percentage point higher than the official estimate and nearly double the current rate.

The table below adds this column of data. Meeting the full output target by 2018 is not impossible, but it does require a substantial increase in labor force participation rates above those currently being forecast for 2018 by the U.S. Bureau of Labor Statistics.

Given these figures, it is unlikely that the entire potential output gap can be closed unless we somehow also reverse the current trend toward lower labor force participation rates among younger workers. Older workers probably cannot save the day all by themselves, but their higher labor force participation rates will be critical to achieve anywhere near the potential output we hope to achieve by 2018.

15. MetLife Foundation/Civic Ventures, Encore Career Survey, 2008.

16. T. Alan Lacey and Benjamin Wright, "Occupational Employment Projections to 2018," Monthly Labor Review, Table 5, November 2009, and analysis of Labor Market Assessment Tool.

17. Marc Freedman, *Encore: Finding Work That Matters in the Second Half of Life*. Public Affairs Books, 2007.

18. These 17 include: biomedical engineers; coaches and scouts; choreographers; registered nurses; psychiatric technicians; veterinary technologists and technicians; licensed practical and licensed vocational nurses; home health aides; nursing aides, orderlies and attendants; occupational therapist assistants; occupational therapist aides; veterinary assistants and laboratory animal caretakers; security guards; dining room and cafeteria attendants and bartender helpers; personal and home care aides; cashiers; and travel guides.

19. These lists of occupational titles are from the U.S. Bureau of Labor Statistics Occupational Employment Survey and form the basis for all the occupations contained within the Labor Market Assessment Tool.

PROJECTED LABOR FORCE PARTICIPATION RATES (LFPR) REQUIRED TO FILL THE PROJECTED 2018 EMPLOYMENT GAP AND OUTPUT GAP

Age Group	2008 LFPR	Current Projected 2018 LFPR (in percent)	2018 LFPR Needed to Fill Employment Gap (in percent)	2018 LFPR Needed to Fill Output Gap* (in percent)
16–24	58.8	54.5	54.5	54.5
25–34	83.3	82.4	82.4	82.4
35–44	84.1	83.2	83.2	83.2
45–54	81.9	81.7	81.7	81.7
55–64	64.5	68.1	74.4	78.1
65–74	25.1	30.5	33.3	35.0
75+	7.3	10.3	12.4	13.0
Total	**66.0**	**64.5**	**66.1**	**70.4**

* Assumes typical worker over age 65 produces 79.1 percent as much output per week as the typical worker age 16 to 64.

Source: Author's calculations

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About the Authors

Barry Bluestone is the Stearns Trustee Professor of Political Economy, the founding Director of the Dukakis Center for Urban and Regional Policy, and the founding Dean of the School of Public Policy and Urban Affairs at Northeastern University in Boston. Before assuming these posts, Bluestone spent 12 years at the University of Massachusetts at Boston as the Frank L. Boyden Professor of Political Economy and as a Senior Fellow at the University's John W. McCormack Institute of Public Affairs. He was the Founding Director of UMass Boston's Ph.D. Program in Public Policy. Before coming to UMass in the Fall of 1986, he taught economics at Boston College for 15 years and was Director of the University's Social Welfare Research Institute.

Mark Melnik is Deputy Director for Research at the Boston Redevelopment Authority. As part of the BRA's Research Division, Melnik leads projects related to Boston's demographic makeup, as well as research on labor market trends in the region. Before joining the BRA, Melnik worked as a Research Associate at the Dukakis Center for Urban and Regional Policy. He is also currently a Ph.D. candidate in Northeastern University's Sociology Department, working on research related to skills mismatches in Boston's current and future labor markets.

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