



america's **dynamicworkforce**



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## SECRETARY'S MESSAGE

By U.S. Secretary of Labor Elaine L. Chao



The American economy is strong and growing. It is a good time for American workers: Job opportunities are increasing, unemployment is low, and compensation is rising. During the past five years, through recession,

terrorism, and natural disaster, the American economy has proven itself to be resilient. We have consistently bounced back from adversity and recorded growth that is the envy of other major industrial nations.

In the first half of 2006 the unemployment rate averaged 4.7 percent. That's lower than the 5.1 percent average of 2005 and a full point lower than the 5.7 percent average unemployment rate of the 1990s. For a comparison, look at France and Germany: They have persistent unemployment rates near double the U.S. rate. And their long-term unemployment of 12 months or more is nearly triple that of the United States.

By June 2006, the latest month for which data for this report were available, the United States had enjoyed 34 months of uninterrupted job growth. More than 5.4 million net new jobs have been created in the United States since August 2003. This level of job creation reflects the overall economic growth that our country has been experiencing. The U.S. economy grew at an average rate of 3.2 percent in 2005, and in the first half of 2006 real GDP gains averaged a 4.1 percent annual rate. That's the best record

among the major G-7 industrialized nations, and it's remarkable for a mature, industrialized nation.

But even as our economy grows steadily, there are challenges. Our country is in the middle of a major economic transformation. Technology has accelerated the pace of change and our country is transitioning to a knowledge-based economy.

Good jobs are still being created in large numbers. In fact, the majority of employment growth over the past five years was in occupations with above-average compensation. But there is a caveat. Most of the new jobs projected for the future are expected to be filled by persons with some kind of post-secondary education. Education to gain the knowledge and skills that are in demand is the key to success in America's dynamic labor market.

Workers who bring to the labor market the knowledge and skills that today's competitive economy demands are finding good jobs and rising compensation; those who do not keep up in terms of knowledge and skills increasingly lag behind in employment and earnings. Our goal at the Department of Labor is to ensure that all Americans have access to the information, training and resources that will help them get the skills they need to access the growing opportunities in our nation's 21<sup>st</sup> century economy.

Despite the difficult challenges that America has confronted over the past five years – terrorist attacks, accounting scandals, devastating hurricanes and high oil prices – our economy is doing well. That performance is a tribute to the dynamism, productivity and flexibility of our nation's workforce.



## ACKNOWLEDGEMENTS

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Veronica Vargas Stidvent, Assistant Secretary for Policy; Suey Howe and Leon Sequeira, OASP Deputy Assistant Secretaries; and John Britton, OASP Chief of Staff provided editorial advice and support throughout the development of *America's Dynamic Workforce: 2006*. Laura Genero, Associate Deputy Secretary for Communications, generously provided insightful advice and assistance at various stages of design and development of the report.

Many of the charts were derived from *Charting the U.S. Labor Market in 2005*, a compendium of labor market condition and trend charts compiled by the Bureau of Labor Statistics (BLS). The BLS report provides more information and technical detail on

many of the topics summarized in this volume. It is available online at [www.bls.gov/cps/labor2005/home.htm](http://www.bls.gov/cps/labor2005/home.htm).

The text and charts for *America's Dynamic Workforce: 2006* were developed and edited by Ron Bird, Chief Economist, and by OASP economists David Langdon, Alison Pasternak, Regina Powers and Lisa Stuart. Additional design assistance and editorial review was provided by Mario Distasio, Kathleen Franks, Jim Jones, Brad Mantel, Sheila McConnell, Fred Siskind, Stephanie Swirsky, and Babette Williams. Gretta Jameson assisted in the coordination of print production.

Diana Furchtgott-Roth, previously Chief Economist at the Department of Labor and now Senior Fellow at the Hudson Institute, edited the original 2004 version of *America's Dynamic Workforce* and provided valuable advice to facilitate the development of the present edition.





## INTRODUCTION

*America's Dynamic Workforce: 2006* presents an overview of current conditions and notable trends affecting the American labor market and economic activity. Primary emphasis is on measures of labor market performance – employment, labor force participation, unemployment, and compensation. General measures of economic performance such as gross domestic product (GDP) and productivity growth are also described as they relate to labor market conditions and trends.

Throughout this report the focus is on the data – what the numbers actually say about the American labor market – and on how individual data items fit together to present an overall portrait of the health and dynamism of the market.

There are six chapters:

- **Chapter 1** summarizes the current levels and trends of payroll jobs, total employment, job openings, turnover, unemployment, and GDP.
- **Chapter 2** provides a global context for understanding the U.S. labor market and compares the United States and other countries along common dimensions of labor market indicators.
- **Chapter 3** presents an overview of patterns, recent trends and projections regarding the distribution of employment across industries and occupations.
- **Chapter 4** examines the educational attainment of the labor force, including trends and comparisons of employment, earnings, and unemployment relative to educational attainment.
- **Chapter 5** examines the concept of labor force flexibility in terms of schedules, work arrangements, and other factors.

- **Chapter 6** highlights the dimensions of opportunity in the American workforce, including dynamic age, gender, race, and ethnicity perspectives.

The end notes provide important technical details, caveats, and references to additional information about the data items discussed in the main text.

Most of the tables and charts in *America's Dynamic Workforce: 2006* reflect annual average data for calendar years ending in 2005 as the most recent full year available. In some cases, monthly data through the latest available month in 2006 (typically June) are also referenced.

In this report, the terms “population” and “labor force” refer to the civilian noninstitutional population ages 16 and older and to the civilian labor force age 16 and over unless specified otherwise. Similarly, data on workers refer to employed persons age 16 and over unless otherwise noted. Monthly or quarterly labor market data are seasonally adjusted unless specified otherwise.

Much of the data in this report were compiled from the public access files of the Bureau of Labor Statistics' Web site at [www.bls.gov](http://www.bls.gov). A number of the charts were derived from the extensive chart book published by BLS, *Charting the U.S. Labor Market in 2005*, and available for download from the BLS Web site.

Readers seeking a more extensive review of international labor market comparisons than the summary provided in Chapter 2 are encouraged to download the Department of Labor publication *A Chartbook of International Labor Comparisons* at [www.dol.gov/asp/media/reports/chartbook/index.htm](http://www.dol.gov/asp/media/reports/chartbook/index.htm).



## 1 GROWING JOBS, OUTPUT AND EARNINGS

The American labor market is strong and resilient. The labor market indicators describe an economy that is creating jobs, expanding output, and rewarding work with good compensation. Since jobs began recovering in 2003 from the effects of the last recession, the economy has tallied 34 consecutive months of job gains (through June 2006, the latest data available for this report). Employment has reached new record heights.

The unemployment rate has fallen significantly from its post-recession high of 6.3 percent and has ranged between 4.8 percent and 4.6 percent during the first half of 2006. Both components of compensation – wages and employer-paid benefits – were higher in terms of real purchasing power in 2005 than in 2000.

### EMPLOYMENT

Net growth in nonfarm payroll employment totaled 5.4 million from August 2003 through the first half of 2006. Job growth during 2005 was 2.0 million. In the first half of 2006 a total of 865,000 net new jobs

were created.

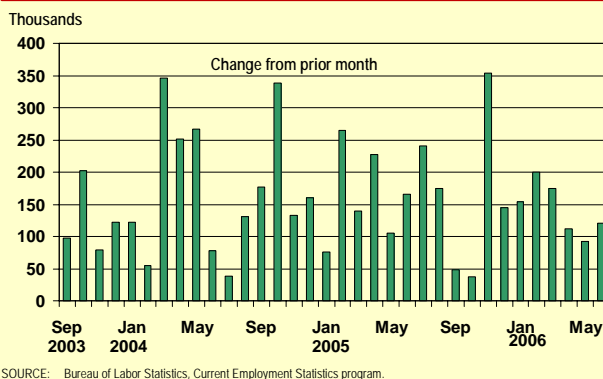
Figure 1-1 shows the monthly record of job gains that began after the post-recession low point in August 2003. Over this period, monthly job gains averaged 160,000. Monthly gains ranged from 37,000 in October 2005, following the Gulf Coast hurricanes to a high of 354,000 in November 2005, reflecting, in part, the post-hurricanes rebound.

In 2005, nonfarm payroll employment averaged a record 133.5 million, over 1.6 million more than the previous record set in 2001. By June 2006, the jobs total reached 135.2 million, a new record. Total employment, including farm and self employment, averaged 141.7 million workers in 2005, an increase of nearly 4.8 million from 2001.<sup>1</sup>

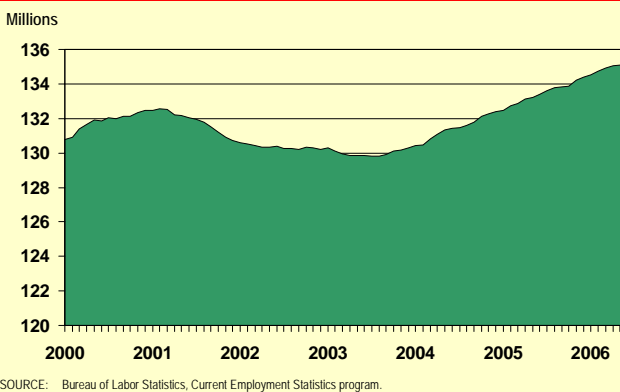
### RECESSION AND RECOVERY

Figure 1-2 shows in detail the monthly levels of payroll employment from January 2000 through June 2006 (latest available for this report). In February 2001, just

**Figure 1-1. Payroll Jobs Have Increased for 34 Consecutive Months through June 2006**



**Figure 1-2. Payroll Jobs Have Surpassed the Pre-Recession Peak**



# america's dynamic workforce: 2006

before the onset of the 2001 recession, payroll employment peaked at nearly 132.6 million. In the recession aftermath, payroll employment declined to a low of 129.8 million in August 2003.

The recession that began in the first quarter of 2001 had its origins in economic events in 2000, when financial market reversals and inventory build-ups appear to have triggered increased layoffs and slower job growth. The disruptions of the September 11 terrorist attacks added pressure to an already declining economy. Job losses totaled 775,000 in the first six months of the recession (March through August 2001). Job losses during September through December amounted to 1.1 million more. The overall recession impact was a loss of nearly 2.8 million jobs over 30 months beginning in March 2001 and extending through August 2003 – equal to 2.1 percent of the pre-recession peak employment.

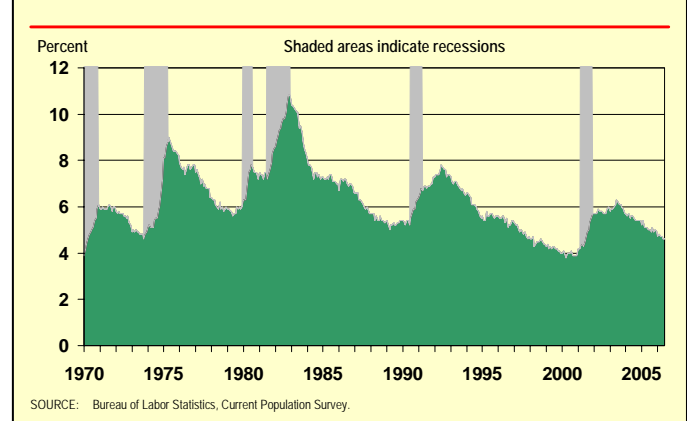
In terms of the proportion of payroll jobs lost, the 2001 recession was more severe than the immediately previous (1990) recession, which recorded a 1.5 percent decline in payroll employment, but less severe than the 1981 recession, which recorded a 3.1 percent decrease in payroll employment.<sup>2</sup>

Job market recovery began after the low-point of August 2003 and has continued without interruption for 34 months through June 2006. In the last four months of 2003, job gains totaled 501,000, or 125,000 per month, on average. In 2004, 2.1 million net new jobs were created; in 2005, the total was 2.0 million; and in the first six months of 2006, 854,000 net new jobs were created.

The rebound of payroll jobs erased the recession losses by February 2005 when the total payroll employment surpassed the previous record of February 2001. By June 2006, payroll employment was nearly 2.7 million higher than the February 2001 mark.

In 2005, the average level of payroll employment increased in 47 of the 50 states compared to 2004. Maine's payroll employment level was unchanged, and Louisiana and Michigan recorded job losses. The average employment increase for the 47 states that experienced job growth was 48,200, or nearly a 2.0 percent gain over 2004. The largest over-the-year increases in annual average payroll employment were in Florida (+300,100), California (+254,800), and Texas (+237,900). The largest annual average percentage increase was in Nevada (6.2

**Figure 1-3. The Unemployment Rate Has Declined to Near-Record Lows**



percent).

## UNEMPLOYMENT

Figure 1-3 shows the trend of the unemployment rate from January 1970 to May 2006. At 4.6 percent in June 2006, the national unemployment rate was at its lowest level in nearly five years.

The unemployment rate declined from a post-recession high of 6.3 percent in June 2003. The unemployment rate was 4.2 percent in February 2001, just prior to the start of the last recession. The previous expansion low-point for the unemployment rate was 3.8 percent in April 2000.

June 2006 marked the 64<sup>th</sup> month since the start of the last recession in March 2001. The

# america's dynamic workforce: 2006

4.6 percent unemployment rate in June compares to a 5.5 percent unemployment rate in the 64<sup>th</sup> month (October 1995) following the beginning of the previous recession in 1990.

At 6.3 percent in June 2003, the peak unemployment rate following the 2001 recession was lower than the peak rate for any recession since the 6.1 percent peak following the 1970 recession. The average peak rate for the previous five recessions (1970s – 1990s) was 8.3 percent.

In 2005, on average, 7.6 million persons were unemployed, and by June 2006 the number had declined to less than 7.0 million. These levels represent a significant decline from the 9.2 million unemployed at the post-recession peak in 2003.

The official unemployment rate calculation classifies persons as unemployed if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work. Each month, BLS also publishes alternative measures of labor underutilization, one of which includes persons not in the labor force who have looked for work in the previous 12 months, and who want a job even though they have not actively looked during the latest reporting period.

In 2005, the number of persons in this “marginally attached” category totaled 1.5 million, of whom 436,000 cited discouragement about job prospects as the reason for not actively looking for work. The remainder cited other reasons, such as lack of

transportation, illness, or family responsibilities. The 1.5 million average level for this group in 2005 was down from 1.6 million in 2004 and comparable to the 1994–2004 average of 1.4 million.

Including the 436,000 discouraged workers in the unemployment rate computation would have raised the 2005 average rate from 5.1 percent to 5.4 percent. Including all 1.5 million of the “marginally attached” would have raised the rate to 6.1 percent, below the post-recession peak of 7.0 percent for this expanded labor underutilization

measure in 2003 and on par with the 6.1 percent average since reporting of this measure began in 1994.

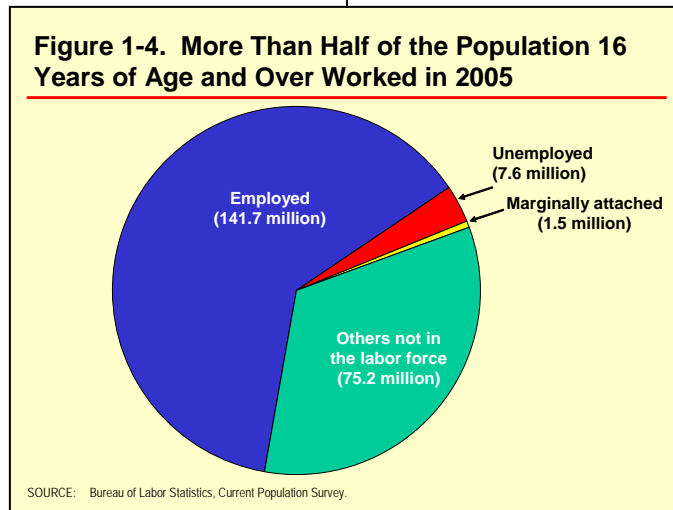
In 2005, the median duration of unemployment averaged 8.9 weeks for the year. On a monthly basis, the median duration of unemployment generally declined in 2005 from 9.3 weeks in January to 8.5 weeks in December.

The post-recession high for median duration of unemployment was 11.5 weeks in June 2003. Since the median duration series was first reported in 1967, the average has been 7.1 weeks.

Figure 1-4 shows the distribution in 2005 of the total 226.1 million noninstitutional civilian population ages 16 and older. The 141.7 million employed comprised 62.7 percent. The 7.6 million unemployed comprised 3.4 percent. Employed and unemployed combined comprise the labor force.

The 1.5 million persons “marginally attached” to the labor force comprised 0.7 percent of

**Figure 1-4. More Than Half of the Population 16 Years of Age and Over Worked in 2005**



# america's dynamic workforce: 2006

the civilian noninstitutional population ages 16 and older. The other 75.2 million persons not in the labor force comprised 33.3 percent of the civilian noninstitutional population ages 16 and older. The 75.2 million individuals not in the labor force included persons who cited reasons such as retirement, disability, and school attendance for being outside the labor force.

Figure 1-5 shows average unemployment rates by state in 2005. Hawaii reported the lowest unemployment rate among the states (2.8 percent). North Dakota had the next lowest rate (3.4 percent), closely followed by Vermont and Virginia (3.5 percent each).

The highest rates were recorded in Mississippi and Louisiana (7.9 and 7.1 percent, respectively), reflecting the impact of the Gulf Coast hurricanes.

The largest unemployment rate declines from 2004 to 2005 occurred in Alabama and Oregon (-1.2 percentage points each).

## JOB OPENINGS AND TURNOVER

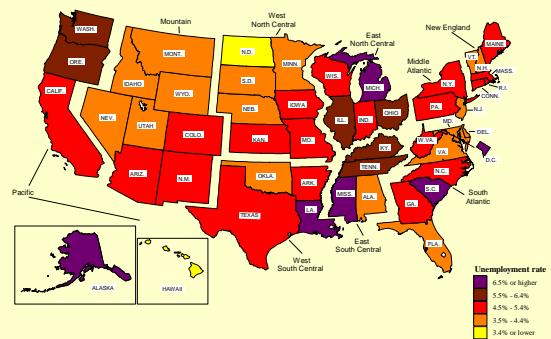
As the unemployment rate has fallen over the past two years, the number of unfilled job openings has steadily risen – another sign of a strengthening labor market.

Figure 1-6 shows that data from the BLS Job Openings and Labor Turnover Survey (JOLTS). As part of the monthly survey, BLS asks employers each month the number of unfilled job openings that exist on the last business day of the month. As of the end of May 2006, there were 4.0 million unfilled job openings nationally. This was an increase of 1.3 million from the post-recession low of 2.7 million at the end of September 2003 and an increase of 500,000 from April 2005.

Job openings include both existing jobs that have become vacant and new jobs that the employer has created but not yet filled. During the course of a month, many jobs become available and many are filled.

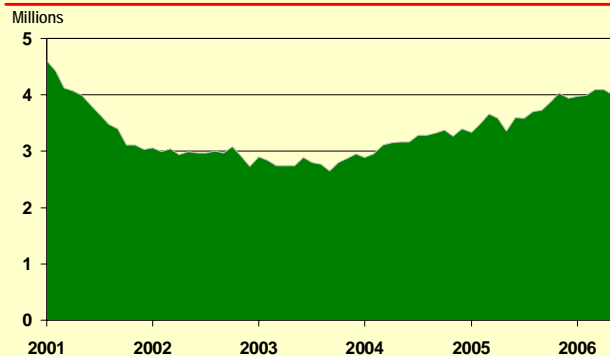
Data for job openings on the last business day

**Figure 1-5. In 2005, Unemployment Rates Were Lowest in the South Atlantic States and Highest in the East North Central States**



NOTE: Data are 2005 annual averages.  
SOURCE: Bureau of Labor Statistics, Local Areas Unemployment Statistics program.

**Figure 1-6. Job Openings Have Increased by Over One Million Since 2003**



SOURCE: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey.

**Figure 1-7. Turnover Shows Labor Market Dynamics**



SOURCE: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey.

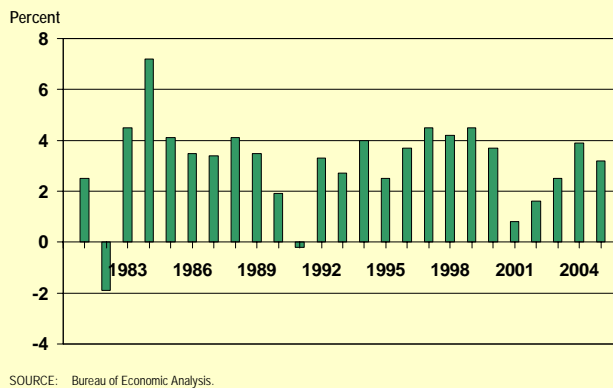
# america's dynamic workforce: 2006

each month provide a snapshot estimate of the typical number of openings on a given day. A rising trend of openings suggests that job opportunities may be growing faster than qualified candidates are being found to fill them.

The JOLTS program also collects data from employers on changes in payrolls. The numbers of separations and hires represent jobs vacated or filled, respectively. Some individuals change jobs or enter or leave the job market several times during a year, so the numbers of individuals who are involved in hires or separations is somewhat smaller than the numbers of jobs affected.

Figure 1-7 shows annual turnover – hires and separations for 2001 to 2005. In 2005, employers made 57.4 million hires to fill vacancies or newly created jobs.<sup>3</sup> On average about 3.6 percent of jobs were filled or re-filled each month. In parallel, over the course of 2005, separations totaled 54.5 million. Separations included 30.9 million voluntary quits by employees, 19.9 million layoffs or discharges, and 3.7 million other separations, including those because of retirement, disability and death. It is likely that many of the voluntary quits involved job changes from one employer to another, but the

**Figure 1-8. Annual Average Growth of Real Gross Domestic Product (GDP), 1981 - 2005**



exact number is unknown.

## OUTPUT AND PRODUCTIVITY

The strength of the labor market is a reflection of the strong growth of real (after inflation adjustment) gross domestic product (GDP) in recent years. In 2005, real GDP reached nearly

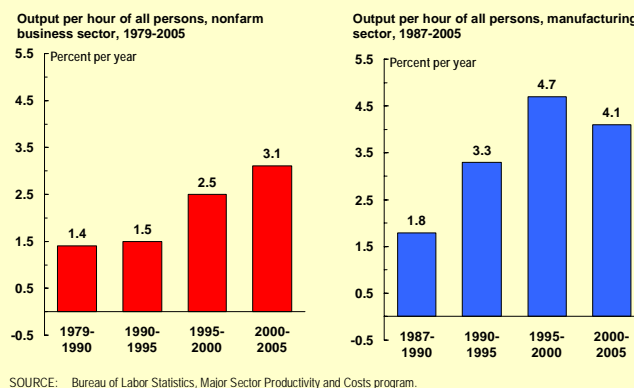
\$12.5 trillion.<sup>4</sup> Since 1980, real GDP has more than doubled.

On a per capita basis, GDP in 2005 was \$42,090. This was 3.4 times the per capita real GDP of \$12,567 in 1948 (2005 dollars), and 1.7 times the per capita real GDP in 1980.

Real GDP growth (Figure 1-8) averaged 3.2 percent in 2005.<sup>5</sup> This followed a 3.9 percent growth rate in 2004 and a 2.5 percent growth rate in 2003. Including the 2001 recession year, real GDP growth over the past five years averaged 2.4 percent per year, comparable to the 2.5 percent average over the 1991-1995 recession and recovery period. Since 1948, annual real GDP growth has averaged 3.4 percent.

Underlying recent strong GDP growth has been a notable increase in labor productivity (Figure 1-9). Growth of labor productivity in the nonfarm business sector averaged 3.1 percent per year over the 2000-2005 period, more than twice the 1979-1990 and 1990-1995 averages.

**Figure 1-9. Labor Productivity Has Accelerated Since 1995, Led by Gains in Manufacturing**



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Acceleration of productivity growth in the nonfarm business sector began in the late 1990s as the annual average growth rate jumped to 2.5 percent.

Growth in manufacturing productivity also has accelerated. Over the 2000-2005 period, output per hour grew at an average annual rate of 4.1 percent. This was a notable gain over the 1987-1990 average of 1.8 percent annual growth.

## COMPENSATION GAINS

Increasing real output and productivity have yielded real gains in compensation for employees. Compensation includes both wages and the cost of benefits such as health insurance, retirement plan contributions, paid leave, and other benefits.

Figure 1-10 shows the index of real hourly compensation of employees in the nonfarm business sector. In Figure 1-10, the recent real compensation growth experience appears similar to the 1947-1970 trend and stronger than the trend of 1970 to 1995.

In the late 1990s, the trend of real hourly compensation increased notably, posting gains of 4.5 percent in 1998, 2.6 percent in 1999, and 3.7 percent in 2000. Over the most recent five years (2001-2005) the growth of

real hourly compensation continued at a relatively robust rate of 1.4 percent per year, compared to the 1977-1997 average annual growth of 0.7 percent and to the 0.6 percent annual average rate for the comparable business cycle years of 1991-1995.

In 2005, the average level of real hourly compensation in the nonfarm business sector was 7.0 percent higher than in 2000.

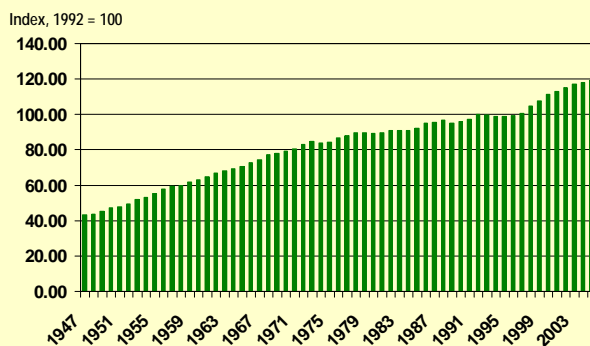
Compensation measured by the Constant Dollar Employment Cost Index (CD-ECI) also shows gains in real hourly terms over the past five years.

The average level of the CD-ECI in 2005 was 5.8 percent higher than in 2000; by comparison, the 1995 level was 3.0 percent higher than in 1990. The CD-ECI facilitates comparisons of changes in the wages and benefits components of compensation. In 2005, hourly wages were 1.9 percent higher than in 2000. Between 1990 and 1995, wages rose 1.1 percent.

Much of the increase in compensation in the past five years was due to higher benefits costs. In 2005, benefits costs measured by the CD-ECI were 16.0 percent higher than in 2000. Rapidly rising benefits costs were also an element of rising compensation in the early 1990s.<sup>6</sup>

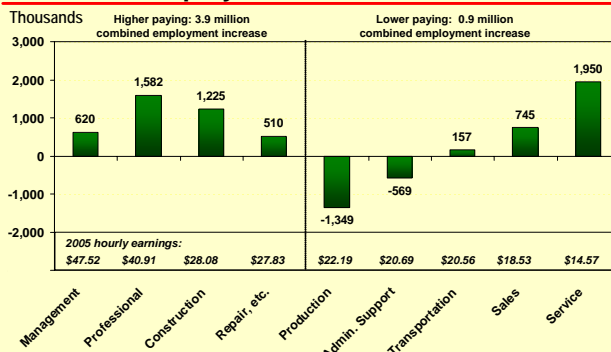
Benefits costs rose

**Figure 1-10. Real Hourly Compensation Index, Nonfarm Business Sector, 1947 – 2005**



SOURCE: Bureau of Labor Statistics, Major Sector Productivity and Costs program.

**Figure 1-11. Higher Paying Jobs Drove Much of 2001-2005 Employment Growth**



NOTE: Across all occupations, average earnings in 2005 were \$26.06 per hour.  
SOURCE: Office of Assistant Secretary for Policy analysis of Bureau of Labor Statistics, National Compensation Survey and Current Population Survey data.



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7.2 percent in constant dollars from 1990 to 1995, compared to the 1.1 percent increase in real wages during that period.

Figure 1-11 illustrates the relationship between increasing compensation and the changing structure of the labor market. Over the past five years, job growth was greater among relatively well compensated occupations: management, business and finance; professional and related; construction and extraction occupations; and repair, maintenance and installation occupations. Each of these four occupational groups paid above the average compensation of \$26.06 per hour in 2005.<sup>7</sup> These four higher-compensation occupations accounted for 3.9 million net additional jobs between 2001 and 2005.<sup>8</sup> The five lower-compensation occupations together accounted for 934,000 net additional jobs. Two of the latter occupational categories had net losses of jobs over the period: production occupations (-1.3 million) and administrative support occupations (-569,000).<sup>9</sup> For the lower-compensation occupations, employment

losses in production occupations and in administrative support occupations offset gains in transportation, sales, and service occupations.

## A GOOD YEAR

2005 was a good year for American workers and the first half of 2006 continued the strong trend. In 2005, job growth resulted in 2.0 million net new jobs and the unemployment rate averaged 5.1 percent over the year. The pace of job growth in the first half of 2006 suggests that we are moving into a steady and sustainable economic path. With the unemployment rate dropping below 5 percent in the first half of 2006, the labor market outlook is favorable for those seeking to enter or re-enter the labor market. The American economy is strong, and our success in meeting the challenges of recent years while continuing economic expansion provides a foundation from which we can expect to successfully meet future challenges that may come our way.

## 2 Strong International Competitiveness

The strength and productivity of American workers are reflected in high per capita output. U.S. per capita gross domestic product (GDP) was \$39,900 in 2004, the most recent year for which broad international comparisons of per capita GDP can be made on a purchasing power adjusted basis. (See Figure 2-1.)

Among member countries of the Organization for Economic Cooperation and Development (OECD), the United States ranked near the top in terms of GDP per capita. Only Luxembourg, Norway, and Ireland (not shown in the figure) had higher per capita GDP. Among large major economies, U.S. per capita GDP was more than 20 percent higher than that of Australia or Canada. Among the largest members of the European Monetary Union (Eurozone), per capita GDP ranged from \$25,300 in Spain to \$29,600 in France.<sup>10</sup> Overall, U.S. per capita GDP was 34 percent higher than in Japan.

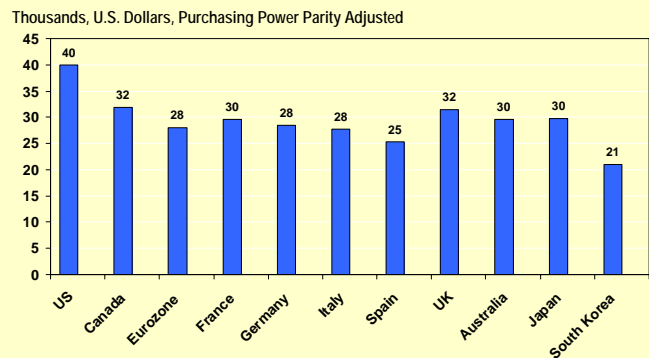
### PRODUCTIVITY IS CRITICAL

Underlying the United States' high per capita GDP is our dynamic, productive workforce. High output per capita reflects efficiency (output per hour worked) as shown in Figure 2-2 and effort (annual hours worked per capita) as shown in Figure 2-3.

On average, each hour on the job contributed \$46.30 to domestic output. Among the large, major economies shown in Figures 2-1 and 2-2, only France achieved greater GDP per hour worked (\$47 per hour), but lower effort resulted in lower per capita output for France compared to the United States.

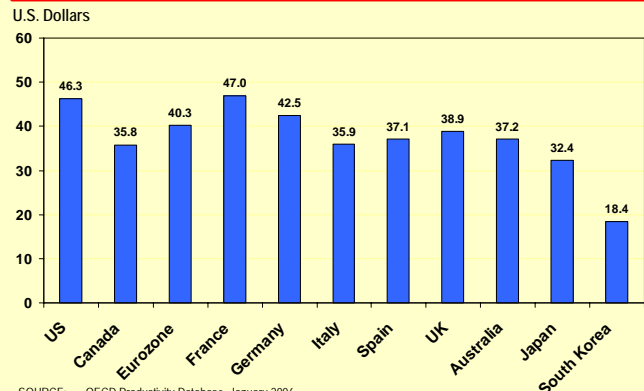
Other Eurozone countries exhibited less efficiency, and the Eurozone as a whole had

**Figure 2-1. GDP Per Capita in 2004, United States and Selected Other Nations**



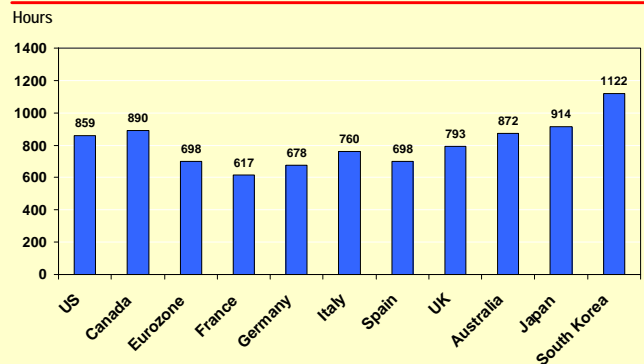
SOURCE: BLS and World Bank. Extracted from Chart 1.1, "A Chartbook of International Labor Comparisons," U.S. Department of Labor, June 2006.

**Figure 2-2. GDP Per Hour Worked in 2004, United States and Selected Other Nations**



SOURCE: OECD Productivity Database, January 2006.

**Figure 2-3. Annual Hours Worked Per Capita in 2004, United States and Selected Other Nations**



SOURCE: OECD Productivity Database, January 2006.

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an average GDP per hour of \$40.30 in 2004. Indeed, a number of European economies, as well as Canada and Australia, posted figures more than \$10.00 per hour lower than the U.S. figure.

The U.S. workforce is a leader in productivity, but what distinguishes the United States from other productivity leaders, like France, is the fact that the U.S. workforce is also a leader in work effort, that is, hours on the job.

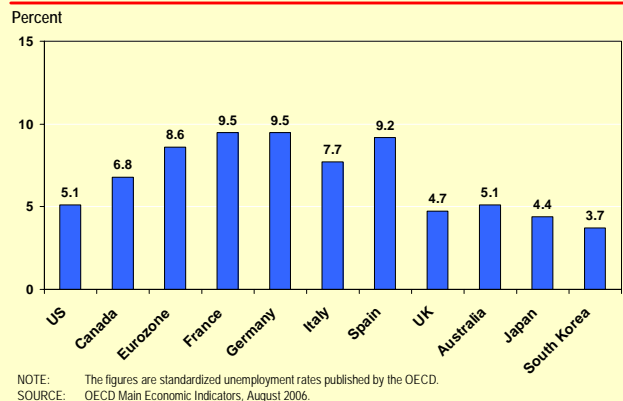
Hours worked per capita is a single measure of the labor activity across the population – taking into account both the proportion of the population that is employed and the number of hours people work. In 2004, per capita hours worked totaled 859 hours, placing the United States in the same neighborhood as Australia and Canada.

South Korea easily surpassed these countries by posting 1,122 hours per capita. The gap reflected the 2,394 hours an average South Korean employee worked per year in 2004; in contrast, an average U.S. worker worked 1,808 hours. On the flip side was France's relatively low hours per capita. Here lies the difference between per capita GDP in the United States and France. In broad terms, the two countries' workers are similarly productive, but the French simply work fewer hours.

With respect to the economic indicators just discussed, the United States generally has led most other OECD nations over the past 10 years. The same holds true across most labor market measures, and it reflects strength throughout the U.S. labor market.

At 5.1 percent, the U.S. unemployment rate in 2005 was well below that of most of its European peers. (See Figure 2-4.) Both Japan and South Korea benefited from even lower rates, continuing long-term trends for both countries. The United Kingdom's rate has hovered around 5 percent for several years, after trending down from over 10 percent in 1993. The U.S. unemployment rate

**Figure 2-4. Unemployment Rates in 2005, United States and Selected Nations**

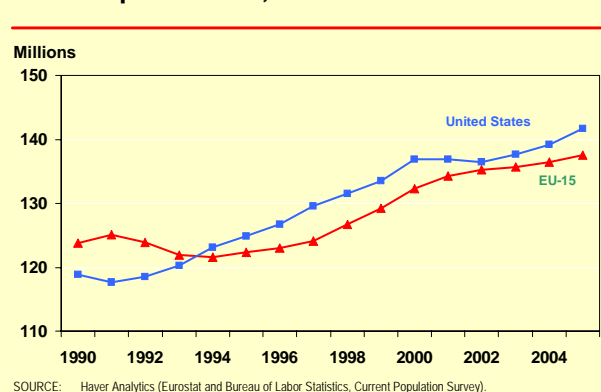


edged down further by mid-2006. In May, it reached a nearly 5-year low of 4.6 percent.

## EMPLOYMENT GROWTH

The best route to low unemployment is strong employment growth, and the United States has enjoyed such growth. The labor

**Figure 2-5. Employment in the United States and the European Union, 1990-2005**



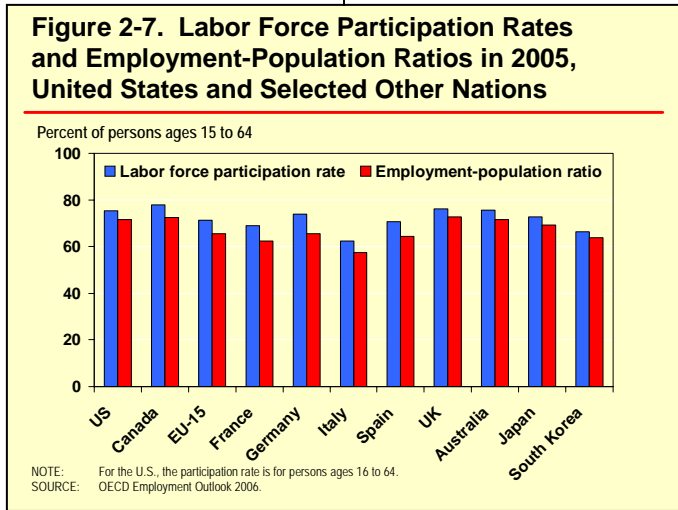
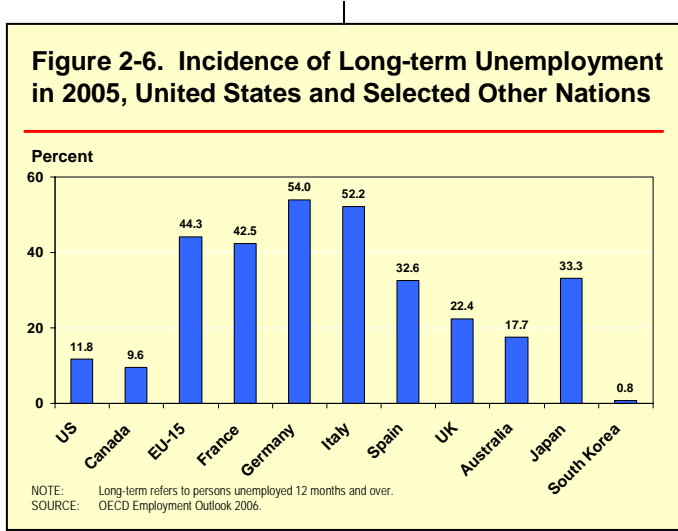
markets of both the United States and the European Union (EU-15) are quite similar in size and make for interesting comparisons.<sup>11</sup> Between 1990 and 2005, civilian employment in the United States rose 19.3 percent, while the comparable measure for the EU-15 rose 11.1 percent. (See Figure 2-5.) Employment clearly has increased in both areas, but the

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EU-15 has outpaced the United States in employment growth for only five of the past 15 years, most notably during and after the last two U.S. recessions, 1990-91 and 2001. Since 2003, the United States again has taken the lead, while a number of European countries have seen somewhat stagnant employment growth, most notably France and Germany.

On the surface, Japan's very low unemployment rates belie its employment woes. Japan saw six consecutive years of employment declines between 1997 and 2003, as the number of employed fell by 2.4 million (3.7 percent). The subsequent recovery in Japan has boosted employment by only 400,000 persons (0.6 percent).

In addition to tepid job growth, a common thread between Japan and Europe is the incidence of long-term unemployment, defined as a spell of unemployment lasting at least 12 months. (See Figure 2-6.) In Japan, the long-term unemployed account for one-third of the total in 2005; in the European Union, the figure was over 44 percent. Even the United Kingdom's share doubled the roughly 12 percent seen in the United States. Despite its relatively higher unemployment rate, Canada's incidence of long-term unemployment was lower than that of the



United States. South Korea enjoyed very low overall unemployment and very low incidence of long-term unemployment.

## LABOR FORCE PARTICIPATION

In Figure 2-7, the blue bars show labor force participation rates for persons ages 15 or 16 to 64 across major OECD economies in 2005. The U.S. labor force participation rate, 75.4 percent (for ages 16-64) was somewhat higher than the 71.3 percent registered in the European Union (for ages 15.64),

The employment-population ratio (red bars in Figure 2-7) provides another

measure of labor force attachment, more specifically, successful attachment, as it excludes the unemployed from the ratio. The difference between the bars indicating labor force participation rates and the bars indicating the employment-population ratio provides a visual reference for comparison of relative unemployment rates.

As with the labor force participation rate, there were only minor differences between the United States and other countries with low unemployment rates. The United States, Canada, United Kingdom, Australia, and Japan all had employment-population ratios in the neighborhood of 70 percent. The notably lower percentages for South Korea reflect its

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relatively low labor force participation rates. For the major European economies (excluding the United Kingdom), the reduced employment-population ratios reflect their elevated unemployment rates as well.

### **BROAD STRENGTH**

These broad labor market indicators highlight the strengths of the U.S. economy and labor market. The successful record of the United States across a broad range of indicators and over an extended time period is remarkable for a mature industrial economy. The fact that the United States has achieved these

results in the face of growing world-wide competition and other challenges, both natural and man-made, is a further testament to the robustness and resilience of an economic system based on free and open markets. High and growing output per capita, growing employment, high labor force participation rates and employment-population ratios, strong productivity growth and low unemployment relative to other nations reflect the energy, creativity, skills, flexibility and competitiveness of American workers and employers.

## 3 Dynamic Labor Market Structure

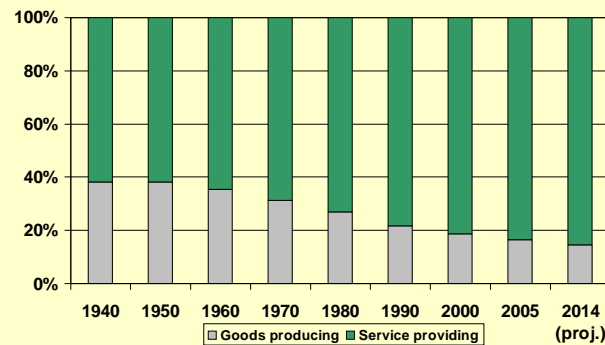
A notable feature of the U.S. labor market is its constant activity as people freely move in and out of the labor market, as total jobs grow, and as workers change jobs. High turnover in the United States – as evidenced by high levels of both separations and hires – partially reflects broad changes over time in the economy's industry and occupation patterns. As the historical employment shift away from the goods-producing sector continues, new employment patterns emerge.

Robust employment growth is the norm. Over the past half-century (1955 to 2005) payroll employment increased from 50.7 million to 133.5 million as our growing population found new jobs in a growing economy. The total number of jobs has doubled since 1967, and over the most recent 15 years (1990 to 2005) total payrolls increased by 22 percent.

Annual employment growth has averaged 2.0 percent since 1955, and only 15 years of the past 50 have seen annual payroll employment growth under 1.0 percent, typically years during or following recessions. Payroll employment in 2005 showed a 1.5 percent gain over 2004.

However, robust total job growth has masked significant changes in the industrial and occupational structure of the labor market. Employment growth rates have varied widely among industries as changing demand,

**Figure 3-1. Goods-Producing and Service-Providing Industry Employment Shares**



SOURCE: Bureau of Labor Statistics, Current Employment Statistics and Employment Projections programs.

technology and global competition have reshaped the labor market.

### STRUCTURAL CHANGE

Figure 3-1 shows the long-term trend of shifting relative share of employment toward the services sector of the economy. The service sector accounted for 62

percent of nonfarm payroll employment in 1940, and that share rose to 83 percent in 2005. The service sector share of payroll employment is projected to rise to nearly 86 percent by 2014.

Over the long time period shown in Figure 3-1, total employment has grown in both the goods-producing and service-providing sectors, but the overwhelming majority of net new jobs have been in the service sector. From 1940 to 2005, 9.8 million net new jobs were created in the goods-producing sector, and 91.3 million net new jobs were created in the service-providing sector.

The growth of service-providing industries has been broad based, and it has been particularly vigorous in private health care. The health care industry and health care occupations throughout the economy have expanded in size and scope in response to technological advances in medicine and an aging population. The professional and business services industry sector has grown as a consequence of higher demand for knowledge-based and technical services.

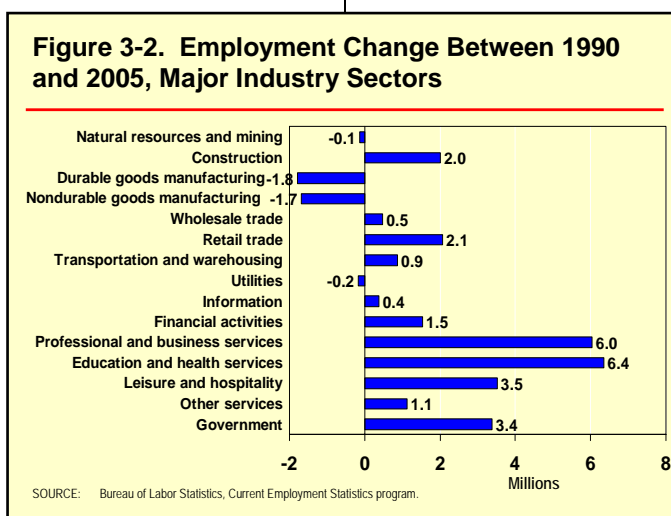
# america's dynamic workforce: 2006

As changing technology and global competition place a premium on organizational efficiency and quick response, the demand for a flexible labor supply has spurred employment growth in the temporary help sector. The changes in the industrial structure of employment have also been reflected in changes in the occupational structure of employment. As service-related industries have grown, employment growth has also shifted toward managerial, professional, and related occupations.

These fundamental changes have presented a challenge to meet new demands for skills, knowledge and talents as labor demand has shifted to expanding industries and occupations.

Figure 3-2 illustrates the on-going shift of the industrial structure of employment in terms of the 1990 to 2005 changes in employment for selected major industry sectors.

The 6.0 million increase in employment for the professional and business services industry sector and the 6.4 million increase in employment for the education and health services sector stand in contrast to net job losses for manufacturing.



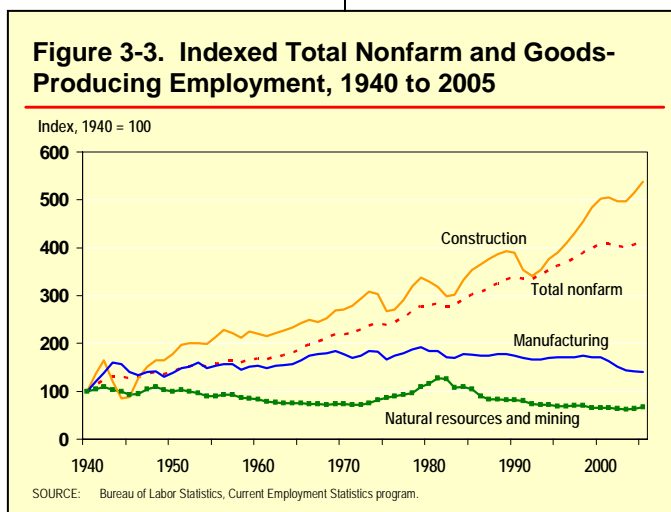
Those two sectors accounted for over half (51.7 percent) of net nonfarm payroll employment growth over the past 15 years. In 2005, the 17.3 million jobs in the private education and health industries sector accounted for 13 percent of all payroll jobs and comprised the second largest of the major sectors.

Representing nearly 4 out of 10 nonfarm jobs in 1940, the goods-producing industries have seen their share of employment diminish steadily over time. By 1990, the goods-producing sector accounted for just 21.7 percent of nonfarm payroll jobs, and, in 2005, goods-producing industries accounted for just 16.6 percent. The goods-producing industries' share of nonfarm payroll employment is projected to drop to 14.4 percent by 2014.

## GOODS-PRODUCING INDUSTRIES

Figure 3-3 shows indexed employment series for the goods-producing industry

supersectors, 1940 to 2005. The data in the chart illustrate the change in payroll employment for each goods-producing sector compared to that sector's 1940 level. The indexed trend of total nonfarm payroll employment is also shown for comparison. Construction has been the exception



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for job growth within the goods-producing industries. Construction job growth generally has kept pace with total nonfarm employment, with the exception of brief cyclical downturns offset by quick recoveries.

The rate of growth following the 1990-91 recession held steady through most of the decade. Only minor job losses came in the period surrounding the 2001 recession, and rapid job growth soon resumed. In 2005, the employment index for construction stood at 538, indicating that the construction industry employment level of 7.3 million in 2005 was more than 5 times greater than the level in 1940. By comparison, manufacturing employment (index = 141) was 41 percent higher than in 1940 and significantly below the all-time high

manufacturing employment index value of 192 in 1979. At 14.2 million in 2005, manufacturing employment reflected a steady decline over the past quarter century of nearly 27 percent.

In 1950, construction accounted for 13.9 percent of goods-producing jobs.

Over the next 40 years, the share rose to 22.2 percent. In 2005, just 15 years later, construction represented 32.9 percent of goods-producing jobs. Steady growth in construction employment has contrasted with flat or falling employment in

manufacturing. The trend in mining employment was weak until a hiring boom occurred in recent years. Rising petroleum prices have fueled much of the growth, although both coal and metal mining have reversed their long-term declines as well.

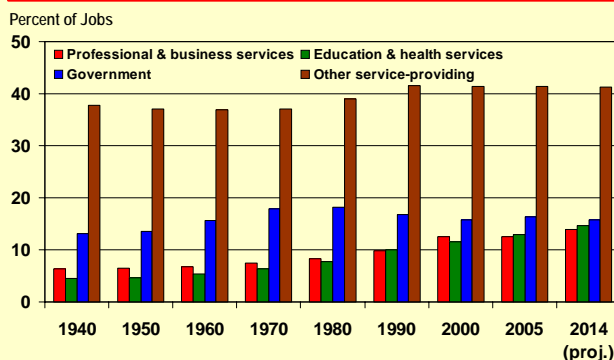
## SERVICE-PROVIDING INDUSTRIES

Among the service-providing industries, two major industries stand out for their job growth since 1990. (See Figure 3-4.) Professional and business services, and private education and health care and social assistance services together represented just 10.9 percent of nonfarm payroll employment in 1940. They represented nearly one in five jobs by 1990 and over one-quarter by 2005. By 2014, they are projected to account for nearly three

out of ten nonfarm payroll jobs. The growth of these two sectors has notably exceeded the growth of government (the leading services sector in terms of employment) and all other private service industries.

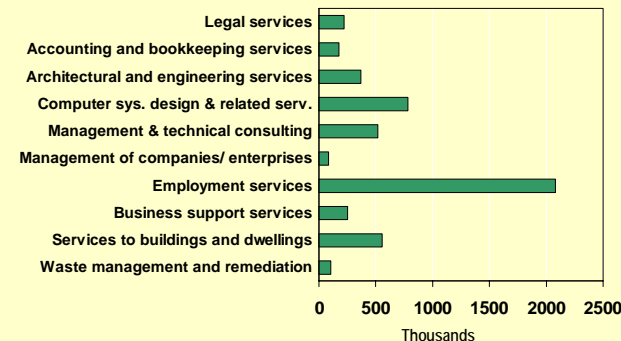
Payroll employment throughout professional and business services has expanded notably over the past decade and a half.<sup>12</sup> Within the sector, only travel arrangement services lost jobs, with all the declines coming since 1998. Gains were especially notable in three industries: employment services; computer systems design and related

**Figure 3-4. Growing Service-Providing Industry Employment, 1940-2005 and Projected 2014**



SOURCE: Bureau of Labor Statistics, Current Employment Statistics and Employment Projections programs.

**Figure 3-5. Employment Change, Selected Professional and Business Services, 1990-2005**



SOURCE: Bureau of Labor Statistics, Current Employment Statistics program.



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services; and management, scientific, and technical consulting. (See Figure 3-5.)

These three industries accounted for just one-fifth of professional and business services employment in 1990 but over half the job gains between 1990 and 2005. This pattern is expected to continue to 2014.

Employment services saw a 139 percent surge in employment between 1990 and 2005. The expansion of temporary help services explains much of the strength in employment services. Temporary help firms provide a just-in-time labor supply that allows firms to adjust their labor input during times of uncertain demand.

For some workers, temporary work can facilitate entry or re-entry into the labor market, particularly for part-time or intermittent assignments. This flexibility translates into relatively low wages for a number of occupations, versus the wage rates for the same occupations outside the temporary help industry. There are important exceptions, however; nurses and computer programmers on temporary help assignments earn more per hour, on average, than their counterparts in other industries.<sup>13</sup>

The computer systems design and management and technical consulting industries are notable not only for their impressive employment growth but also for their relatively high earnings. Between 1990 and 2005, these industries together added 1.3 million jobs, a 177 percent jump, while private service-providing employment in general rose by one-third. In 1990, workers in the two industries earned more than the average for all private service-providing

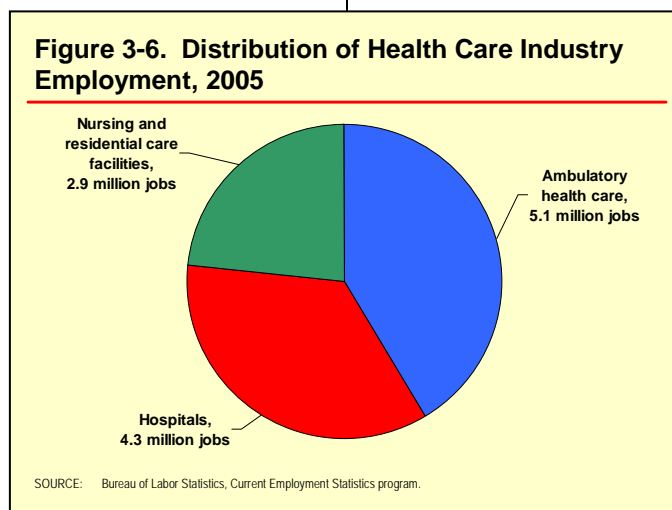
industries, and their earnings increased more over the subsequent 15 years. Average weekly earnings for nonsupervisory workers increased 69.1 percent to \$848 in management and technical consulting and 72.3 percent to \$1,203 in computer systems design services. Over the same period, average weekly earnings for private service-providing industries increased 61.2 percent to \$509.

The health care sector includes some of the largest and fastest-growing private industries in terms of employment. With 12.3 million payroll employees in 2005, the private health care industry comprised 9.2 percent of all payroll jobs and 71 percent of total jobs in the large education and health industry super-sector. Overall health care sector employment grew by 4.1 million between 1990 and 2005 – a 50 percent increase.

Within the health care sector, the ambulatory care industry group grew by 80 percent (2.3 million jobs) from 1990 to a total of 5.1 million jobs in 2005, making it the largest subcategory within health care. (See Figure 3.6.) This industry includes offices of physicians and other health practitioners, outpatient care centers, medical laboratories, and home health care services.

Private hospitals added 834,000 jobs from 1990, bringing 2005 hospital employment to 4.3 million, a 23.8 percent increase. Nursing and residential care facilities added 1.0 million jobs, a 54 percent increase that brought total employment in nursing and residential care facilities to 2.9 million in 2005.

Another long-term trend evidenced by industry employment shifts is a transition



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in retail trade away from traditional food and beverage stores and toward general merchandise stores – particularly toward warehouse clubs, superstores, and discount department stores.<sup>14</sup>

Data on weekly earnings of nonsupervisory workers in these industries do not suggest that these shifts are systematically resulting in the replacement of higher-paying jobs with lower-paying jobs. As of 2005, weekly earnings in food and beverage stores were \$326, versus \$320 in discount department stores and \$342 in

warehouse clubs and super centers. Although weekly earnings growth has stagnated in food and beverage stores in recent years, earnings are rising steadily in the latter two industries.

## BUSINESS EMPLOYMENT DYNAMICS

Figure 3-7 shows another perspective on the dynamics of the American labor market – gross job creation and loss as business establishments start or cease operations and expand or contract the size of their payrolls. The chart displays quarterly estimates of gross job gains and losses from first quarter 1995 through third quarter 2005 (not seasonally adjusted). The data are derived from the BLS Business Employment Dynamics (BED) program and show the transitory job flows into and out of the labor market. These data include the flow of jobs resulting from the constant reshuffling of employment opportunities in the economy, as well as seasonal fluctuations, as businesses adjust their payrolls and respond to the forces of supply and demand.

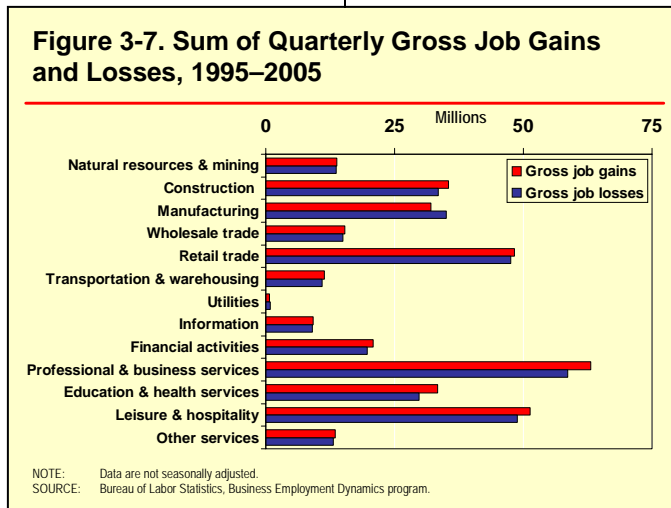
During the period, job creation because of the opening of new establishments or the expansion of existing ones totaled 352 million, and job elimination because of closing of some establishments or reductions in numbers of jobs at others totaled 337 million.<sup>15</sup> The flows

of job creation and elimination in the dynamic labor market somewhat mirrored the patterns of net job creation or loss shown earlier in Figure 3-2, but not entirely.

The professional and business services industry sector experienced a high number of gross job gains – 63.1 million,

but during the same period closing or contracting establishments lost 58.6 million jobs. While this growing sector experienced significant net job increases, the forces of change sweeping across the economy were more complex than the net change suggests. This growing sector experienced both the highest number of jobs created and the highest number of jobs eliminated as competition sorted out the successes and the failures among new and existing business establishments.

The retail trade and the leisure and hospitality industry sectors also experienced high levels of job creation and elimination during the period, despite relatively smaller net job growth compared to the professional and business services sector. The high rates of gross job gains and losses for these industries reflect the characteristics of competition in those industries – a relatively high turnover of establishments (openings and closings) as well as seasonal expansions and contractions of payrolls in these highly competitive and



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rapidly changing sectors. The relatively smaller experience of job creation and elimination for the education and health care sector reflects the greater stability and longevity of establishments in these industries.

It is notable, also, that manufacturing, which experienced net employment decline, also experienced relatively high levels of job creation in parallel with job elimination. In manufacturing 35.1 million jobs were eliminated in aggregate during the period, but job gains in new or expanding establishments totaled 32 million. While the overall level of jobs in manufacturing was falling over the past decade, new jobs were also being created.<sup>16</sup>

accounted for 20.3 percent (28.8 million) of total employment in 2005, up from 16.9 percent in 1985. Employment growth of 10.7 million in professional and related occupations accounted for 30.9 percent of total employment growth over the 1985 to 2005 period.

Management, business and financial operations occupations accounted for 14.5 percent (20.5 million) of total employment in 2005, up from 12.4 percent in 1985. Employment growth of 7.2 million in management, business and financial operations occupations accounted for 20.8 percent of total employment growth over the 1985 to 2005 period.

## OCCUPATIONAL TRENDS

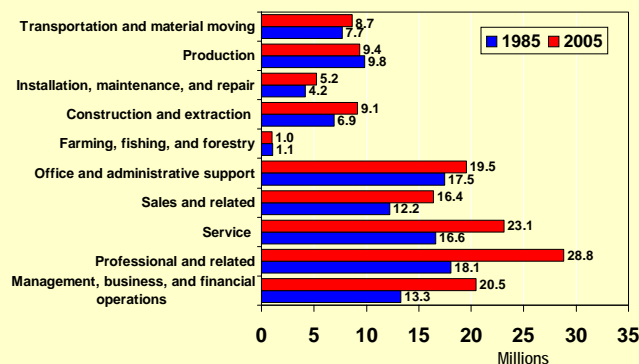
Occupational employment data also highlight patterns of structural change that are expected to persist. Figure 3-8 shows the level of employment by occupation in 1985 and 2005.<sup>17</sup>

Over the past 20 years the major occupation groups with both the fastest percentage growth and the largest numerical increase in employment were professional and related occupations and management, business and financial operations occupations.

Professional and related occupations

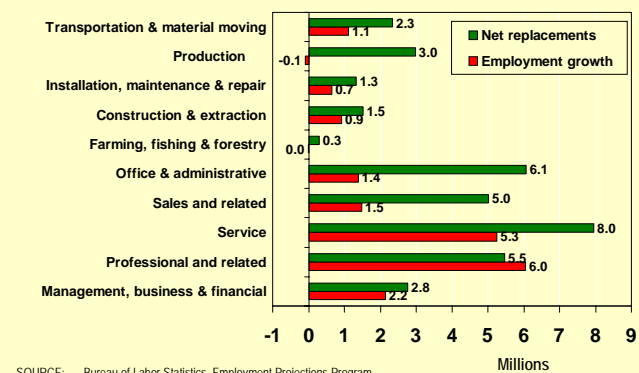
Projections of employment growth from 2004 to 2014 show continuation of the trends of growth in management and professional occupations. Figure 3-9 shows both projected job growth and job openings for net replacement of retirees and others who are expected to permanently leave occupations over the 2004-to-2014 period. The projections show that job demand will be strong in coming years. Over the period, net job growth is expected to total 18.9 million. In addition to job growth, net replacement for retirees and others leaving the labor

**Figure 3-8. Employment by Occupational Categories, 1985 and 2005**



SOURCE: Bureau of Labor Statistics, Current Population Survey. Data are from the specially constructed conversion series available online at <http://www.bls.gov/cps/constio198399.htm>.

**Figure 3-9. Employment Growth and Net Replacement by Occupations, 2004 to 2014**



SOURCE: Bureau of Labor Statistics, Employment Projections Program.

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force is expected to provide another 35.8 million job openings. Together, growth plus net replacement will yield 54.7 million cumulative job openings between 2004 and 2014.

Growth-related job openings over the 10-year period will be greatest in professional and related occupations (6.0 million jobs) and in service occupations (5.3 million). Growth-related job openings will also be strong in the management, business, and financial occupations (2.3 million) and in office and administrative support occupations (2.0 million). Only one major occupation is projected to see no increase in job openings due to growth: farming, fishing, and forestry occupations.

The largest major occupation category in terms of replacement needs will be the service occupations group, which includes a broad range of detailed occupation categories including police officers, firefighters, barbers, hairstylists, cooks, waiters, health care aides, janitors, and maids. Between 2004 and 2014 it is projected that 8.0 million replacement job openings will need to be filled in the service occupations category in addition to the 5.3 million jobs expected to open because of growth.

Professional and related occupations are expected to need 5.5 million jobs filled for replacement needs in addition to the 6.0 million openings associated with occupational employment growth. Within the professional and related occupations category, health care workers will be especially in demand. Between 2004 and 2014, it is projected that

3.0 million job openings for growth plus net replacement will become available in the professional categories of health care practitioners and technical occupations. These will include 1.2 million registered nurses and 1.0 million health technologists and technicians. Management occupations will have growth and net replacement openings for 105,000 medical and health services managers. Service occupations will include openings for 1.7 million health care support services workers.

Office and administrative occupation are projected to yield 5.5 million job openings for replacement needs, in addition to the moderate growth needs of 2.0 million. Even production occupations will need workers: 2.5 million net replacement openings are projected despite little increase in job openings due to growth. In America's dynamic labor market, job opportunities can persist even in shrinking industries or occupations.

## **PERSISTENT CHANGE**

The American labor market has met the challenges of increasing global competition, changing technology and shifting market demands that have reshaped the industrial and occupation structure of employment. The willingness of American workers to adapt to changing realities, to learn new skills, and to seize new opportunities have helped keep employment growth high and unemployment low. The outlook for the future is for continued structural change from both the industrial and occupational perspectives and for continuing growth of job opportunities.

## 4 Education Pays

Sixty-five years ago only about one in twenty Americans ages 25 or older was a college graduate. Many jobs required no more than basic literacy and physical skills largely learned through experience. The change in the educational attainment of the labor force since the 1940s has been dramatic.

Figure 4-1 shows that by 1970, 14.1 percent of the labor force ages 25 to 64 (8.7 million persons) had completed four years of college.<sup>18</sup> In addition, 11.8 percent (7.3 million persons) had completed some college, but were short of completing a four-year program. The group with some college includes those with two-year associate degrees or post-secondary vocational certificates in addition to college dropouts who did not complete any degree program.

As recently as 1970, a high school diploma was sufficient for most jobs, and 38.1 percent of the labor force (23.5 million persons) had completed no education beyond high school (12<sup>th</sup> grade). In 1970, 36.1 percent of the labor force (22.3 million persons) had not completed high school.

### RISING EDUCATIONAL ATTAINMENT

The proportion of persons ages 25 to 64 years old with some college (or an associate degree) more than doubled between 1970 and 2005 (from 11.8 percent to 27.8 percent). The

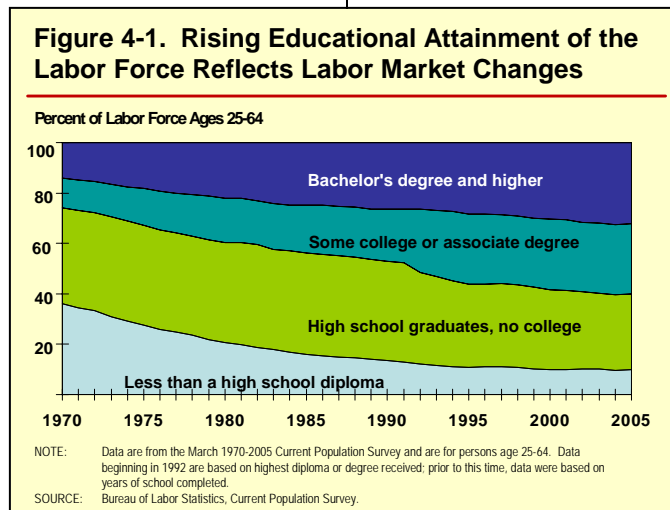
share with a bachelor's degree or higher also more than doubled over the period (from 14.1 percent to 32.3 percent). In contrast, the share of the labor force with less than a high school diploma declined markedly.

In 2005, 32.3 percent (38.9 million) of labor force members age 25 to 64 had earned a bachelor's degree or higher, 27.8 percent (33.4 million) had undertaken some college but had not attained a baccalaureate degree, 30.1 percent (36.3 million) had attained only a high school diploma (or GED certificate), and 9.8 percent (11.8 million) had attained less than a complete high school education (no diploma or GED certificate).

The number of people age 25-64 in the labor force with less than a complete high school education fell by nearly half (- 47.1 percent) since 1970. Over that period the number of persons with some post-secondary education (some college, associate degree, bachelor's degree or

higher) increased from 16.0 million (25.9 percent of the age 25-64 labor force) to 72.4 million (60.1 percent of the age 25 to 64 labor force).

The relationship between educational attainment and wages is strong and positive. Figure 4-2 shows that among workers 25 years old and over, median weekly earnings of wage and salary workers who usually work full time are nearly two and a half times more for



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persons with at least a college degree than for those who have not completed high school.

The weekly difference of \$604 in 2005 would amount to an annual difference of \$31,408 if extended over a 52-week year.

The trend toward higher educational attainment represents more than changing opportunities and tastes for consuming education services. The trends in educational attainment are closely associated with the trends in the occupational and industrial structure of the labor market, especially the growth in the demand for workers to provide professional, technical and managerial services as described in Chapter 3.

## THE EDUCATION PREMIUM

The growing demand for educational attainment over the past three decades is a factor underlying the increase in the education premium over the period. The education premium is the difference in earnings between the lower and higher educated groups in the labor force.

Figure 4-3 shows the increasing spread of earnings between the major education groups.

In 1979, the \$334 difference (in 2005 inflation-adjusted dollars) in median weekly earnings of usual full-time workers between those with less than a high school diploma

and those who had completed 4 or more years of college amounted to a 63.7 percent education premium – college completers enjoyed 1.6 times higher median weekly earnings than high school dropouts. By 2005, the education premium had risen to 148 percent: College graduates with a bachelor's or higher degree had median weekly earnings nearly 2.5 times greater than the typical high school dropout earned.

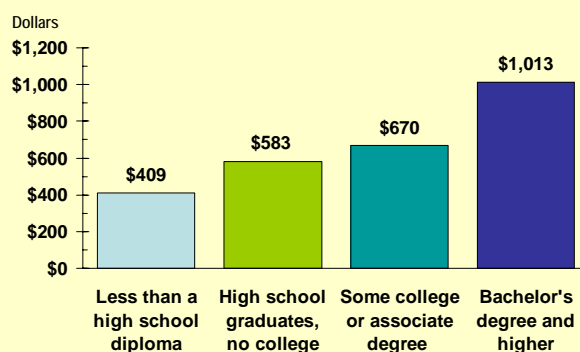
Only college graduates have experienced growth in real median weekly earnings since 1979. In contrast, high school dropouts have seen their real median weekly earnings decline by about 20 percent.

The earnings gains from higher educational attainment are also apparent in gender comparisons. In

2005, among wage and salary workers age 25 or older who usually work full time, both women and men who were college graduates earned more than twice as much per week compared to their counterparts with less educational attainment than a high school diploma.

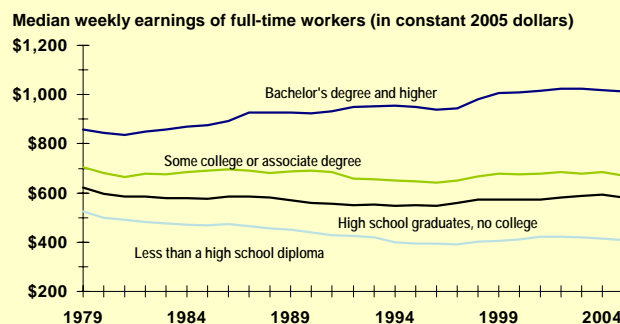
Women with college degrees (bachelor's degree or higher) reported median earnings of \$883 per week, 2.6 times as much as women with less than a high school diploma, 1.8 times as much as women with a high school diploma and no college, and 1.5

**Figure 4-2. Median Weekly Earnings of Full-Time Wage and Salary Workers Age 25 and Over, 2005**



SOURCE: Bureau of Labor Statistics, Current Population Survey.

**Figure 4-3. Real Median Weekly Earnings for College Graduates Have Trended Up Over Time**



NOTE: Median weekly earnings of full-time wage and salary workers 25 years of age and over. Earnings data have been adjusted using the CPI-U-RS. Data beginning in 1992 are based on highest diploma or degree received; prior to 1992, data were based on years of school completed.

SOURCE: Bureau of Labor Statistics

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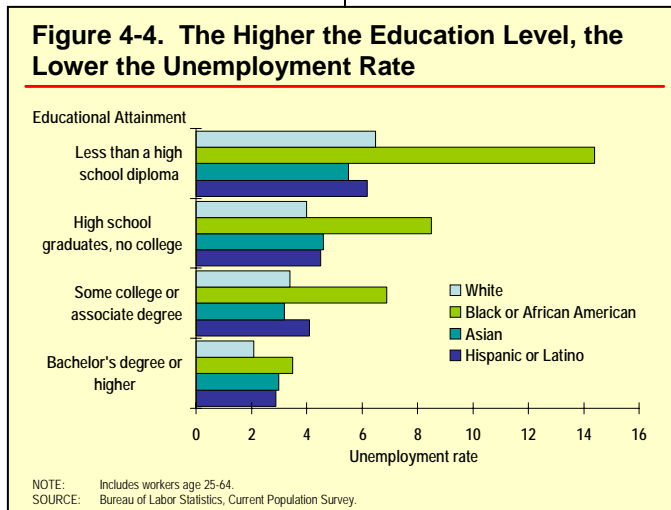
times as much as women with some college but less than a bachelor's degree.

Men with college degrees (bachelor's degree or higher) reported median earnings of \$1,167 per week, 2.6 times as much as men with less than a high school diploma, 1.8 times as much as men with a high school diploma and no college, and 1.5 times as much as men with some college but less than a bachelor's degree.<sup>19</sup>

## EDUCATION AND UNEMPLOYMENT

Educational attainment is an important determinant of other labor market outcomes including unemployment rates and labor force participation rates. In 2005, the unemployment rate for college graduates (bachelor's degree or higher) age 25 and older averaged 2.3 percent. In comparison, persons age 25 or older without a high school diploma experienced 7.6 percent unemployment on average. The corresponding unemployment rate for high school graduates with no college was 4.7 percent, and the unemployment rate for those with some college but less than a bachelor's degree was 3.9 percent.

Figure 4-4 shows that higher educational attainment is associated with lower unemployment rates regardless of race or

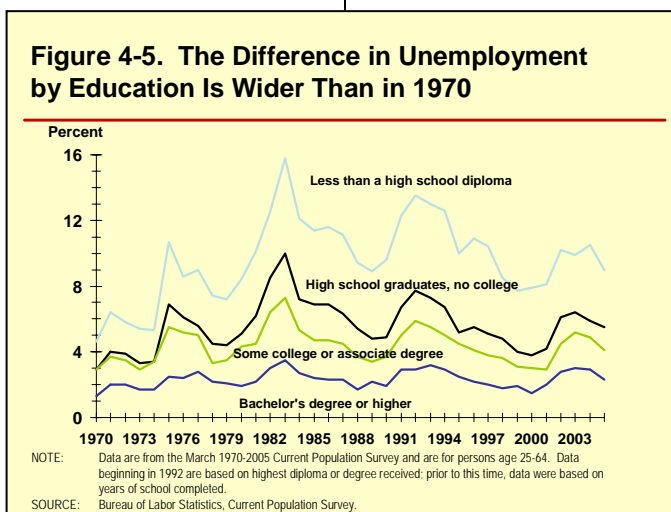


ethnicity. The unemployment rate, however, is particularly lower for African American college graduates than high school dropouts. – 3.5 percent for college graduates versus 14.4 percent for those without a high school diploma (or GED).

The relative cost of being a high school dropout has grown in terms of unemployment risk. The unemployment rate for high school dropouts spiked in the early 1980s, and while trending downward somewhat since then, it is still considerably higher than for other groups. The jobless rate for college graduates has been consistently lower and less subject to business cycle fluctuations than the unemployment rates associated with lower educational attainment.

Figure 4-5 shows how the gap in unemployment rates between those with a 4-year college degree and those without a high school diploma has increased since 1970.

## LABOR FORCE PARTICIPATION



Educational attainment is also associated with notable differences in labor force participation. For individuals age 25 and older, the labor participation rate in 2005 averaged 79.5 percent for those with advanced degrees (masters degree, first

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professional degree or doctoral degree), 77.4 percent for those whose highest degree was a bachelor's degree, 76.7 percent for persons with an associate (typically two-year) degree, 70.2 percent for those with some college but no degree, 63.2 percent for those with a high school diploma only, and 45.5 percent for those without a high school diploma.

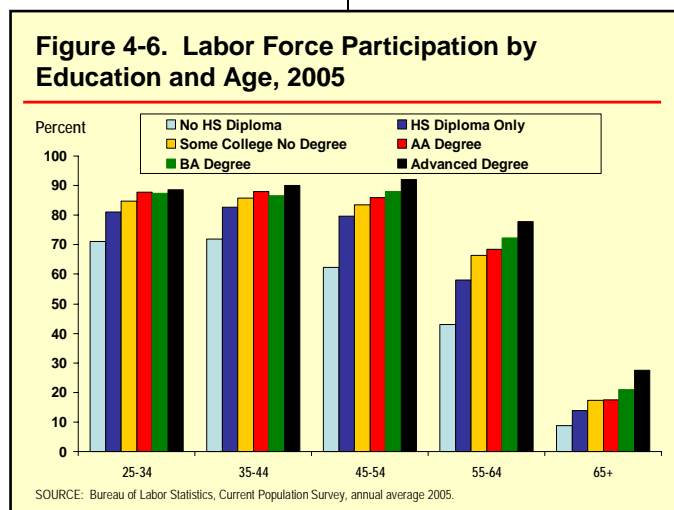
To some extent the differences in labor force participation reflect the fact that educational attainment is generally lower among older Americans, whose lower labor force participation is the result of retirement or disability. For example, in 2005 the 35.1 million Americans age 65 and older included 7.6 percent with advanced degrees and 11.4 percent with bachelor's degrees only, compared to 9.7 percent advanced degree holders and 18.2 percent bachelor's degree (only) holders for the total population age 25 and older. At the lower end of the educational attainment range, individuals without high school diplomas accounted for 25.6 percent of the age 65 and older population versus 14.7 percent of the overall population age 25 and older.

However, Figure 4-6 shows that despite the overall differences in educational attainment across the age groups, higher educational attainment is associated with higher labor force participation within each age cohort. For the oldest

Americans (ages 65 and older) 27.4 percent of the 2.7 million with advanced degrees and 20.9 percent of those with bachelor's degrees only were in the labor force in 2005.<sup>20</sup> Also among the 65 and older age group, only 8.7 percent of persons without a high

school diploma and 13.8 percent of persons with a high school diploma but no college were in the labor market.

- For the 55-to-64 age group the labor force participation rate ranged from 77.8 percent for advanced degree holders and 72.4 percent for those with a bachelor's degree only, to 43.0 percent for those without a high school diploma or GED certificate.
- For the 45-to-54 age group, the labor force participation rate ranged from 92.1 percent for advanced degree holders and 88.0 percent for those with a bachelor's degree only, to 62.3 percent for those without a high school diploma or GED certificate.
- For the 35-to-44 age group, the labor force participation rate ranged from 90.1 percent for advanced degree holders and 86.6 percent for those with a bachelor's degree only, to 71.8 percent for those without a high school diploma or GED certificate.
- For the 25-to-34 age group, the labor force participation rate ranged from 88.6 percent for advanced degree holders and 87.3 percent for those with a bachelor's degree only, to 71.0 percent for those without a high school diploma or GED certificate.



Combined with the earnings advantages of higher educational attainment, higher labor force participation at older ages translates into a real economic advantage for those who attain higher education.



# america's dynamic workforce: 2006

## EDUCATION AND JOBS PROJECTIONS

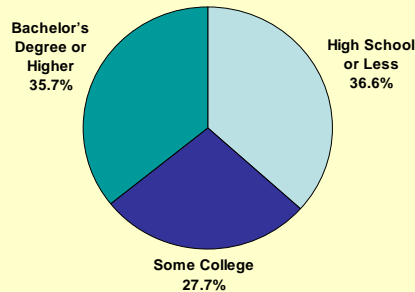
The demand for a highly educated workforce is expected to continue. BLS projections for 2004 through 2014 indicate that nearly two-thirds (63.4 percent) of the projected 18.9 million new jobs will most likely be filled

by workers with some post-secondary education. (See Figure 4-7.) While most of the 18.9 million new job openings because of growth will be in occupations for which workers with higher educational attainment will be the most suited, there will also be many jobs available for those with less education.

In addition to growth, the BLS projections estimate openings because of net replacement needs – replacement of workers who permanently leave occupations for retirement or other reasons. The beginning of retirement of the Baby Boom generation over the next several years will contribute to replacement openings across occupations all along the spectrum of education requirements. Between 2004 and 2014, BLS projections show that the number of net replacement openings will total 35.8 million and total openings for both growth and net replacement needs will be 54.7 million. In general, occupations in the high-school-or-less

**Figure 4-7. Nearly Two-Thirds of New Jobs Are Expected to Be Filled by Workers with Some Post-Secondary Education**

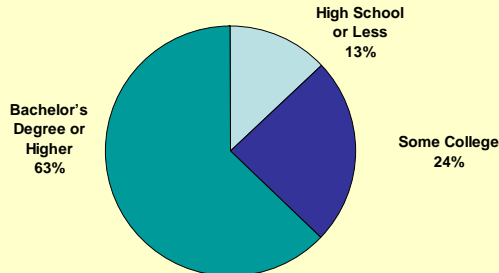
Projected Employment Change, by Educational Attainment



Source: Bureau of Labor Statistics, Employment Projections program, National Employment Matrix 2004-2014.

**Figure 4-8. Most New High-Growth, High-Wage Jobs Are Expected to Be Filled by Workers with a Bachelor's Degree or Higher**

Projected Employment Change In High-Growth, High-Wage Jobs, by Expected Educational Attainment



Source: Bureau of Labor Statistics, Employment Projections program, National Employment Matrix 2004-2014.

educational requirements cluster will account for a greater share of replacement job openings than of growth job openings because many of those occupations have a high turnover, an aging incumbent workforce and relatively large replacement needs despite slower

relative growth.

Within the projected job growth category, the projection for the high-growth, high-wage subgroup is particularly noteworthy. High-growth, high-wage jobs are occupations that are in the top half of the 2004 OES earnings distribution (median

annual earnings greater than \$28,770) and are projected to experience higher-than-average job growth over the 2004-2014 horizon. Among the 18.9 million new jobs associated with projected growth by 2014, 8.7 million fall within the high-growth, high-wage group.

Figure 4-8 shows that among those occupations with both high growth and high wages, 87.0 percent of new jobs are expected to be filled by workers with at least some post-secondary education. Within the high-growth, high-wage group, 5.5 million jobs (62.8 percent of the total) will most likely be filled by workers with at least a bachelor's degree and 2.1 million (24.2 percent) by those with some post-secondary education, such as a two-year community college academic

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program, a vocational certificate or specialized formal training.

## **FACTORS DRIVING DEMAND FOR EDUCATED WORKERS**

Technology has played a role to spur the demand for a more highly educated workforce. Many technological innovations require more educated workers to install, operate and maintain equipment. This is particularly true for information and communications technology which has led the dramatic rise in productivity over the past 20 years. Technological change has introduced new occupations that require new skills and education in new subjects, and it has changed the educational requirements and skill content of many traditional occupations.

Another factor contributing to the growing demand for educational attainment is the pace of change in both technology and in the competitive conditions of global markets. The faster pace of change in the modern economy means that both employers and employees must adapt to new conditions more often than in the past. To remain competitive, employers introduce new products and new processes to produce goods or services. Employees need new knowledge and skills to maintain current jobs or to find new ones.

The latest longitudinal survey data show that the average American worker between ages 37 and 45 in 2002 had changed jobs 10.2 times

between ages 18 and 38. For workers who started a new job between ages 33 and 38, a total of 39 percent reported that they changed jobs again within a year and 70 percent changed jobs again within five years.<sup>21</sup>

## **AN INVESTMENT IN OUR FUTURE**

The commitment and investment in education that Americans have made to achieve higher levels of educational attainment reflect their realization of the present and future benefits of education for labor market success. The 101.1 million Americans ages 25 and older who had completed some post-secondary education in 2005 comprised a valuable national asset of knowledge, skill, and experience. Of these, 18.4 million were advance degree holders, 34.5 million had a bachelor's degree, 16.5 million had completed two-year associate or vocational degree programs, and 31.8 million had some college education but no degree.

The 21<sup>st</sup> century labor market seeks and rewards workers who can offer the educational foundation, technical skills and creative flexibility that employers need to compete and to adapt to changing needs successfully. Higher educational attainment contributes to a worker's ability to efficiently absorb new knowledge and to learn new skills. Workers who can quickly move up the learning curve of a new job have a competitive advantage for economic success.

## 5 America's Flexible Labor Market

Flexibility is a hallmark of the American labor market, which places a high value on the freedom to choose one's work and the terms of employment. America's labor market is characterized by a dominance of the at-will employment relationship, which provides labor market flexibility by keeping hiring costs and separation costs relatively low.

### CHANGING JOBS

Flexibility allows workers to take advantage of new opportunities and to move from one job to another. The notion of one job over the course of one's work life is not a pervasive feature of the American labor market. As Figure 5-1 shows, in 2004, longer employment tenure was most common among men in their 50s, with just over half of those men reporting ten or more years of employment with their current employer.

Over the last two decades, the proportion of men with ten or more years of employment with their current employer has declined for all age groups. For

example, among employed men age 40-44 years, 51.1 percent had worked for their current employer for at least ten years in 1983. In 2004, the proportion was only 36.2 percent.

For women, the evidence about job tenure is more mixed. As Figure 5-2 shows, the proportion of women employed by their current employer for at least ten years

increases with age. Longer employment tenure was most common among women in their 60s, with just over half reporting ten or more years with their current employer in 2004.

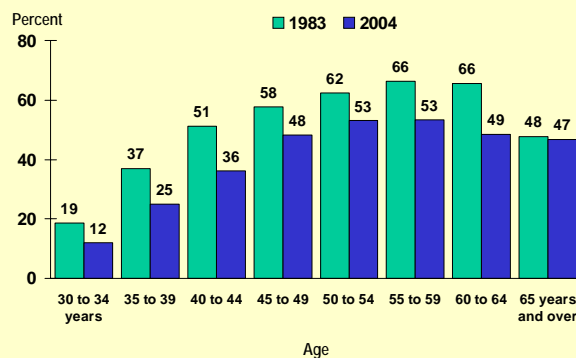
For women, changes over time in these proportions vary by age. Longer employment tenure has become

somewhat more common among women age

40-54. For example, for women age 40-44 years, the proportion increased from 23.4 percent in 1983 to 28.5 percent in 2004. In contrast, for women 30-34 years old, the proportion decreased from 14.8 percent in 1983 to 9.8 percent in 2004.

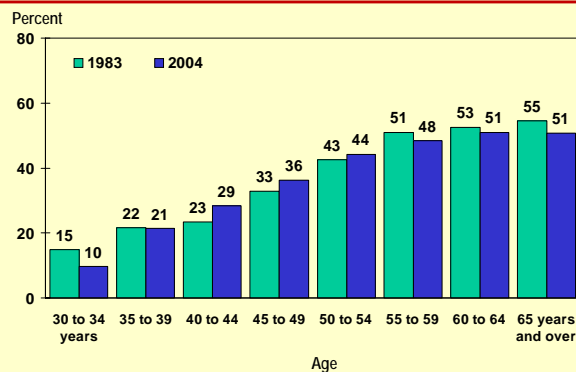
The changes in job tenure over time

**Figure 5-1. Men with Ten or More Years of Tenure with Current Employer**



SOURCE: Bureau of Labor Statistics, Current Population Survey.

**Figure 5-2. Women with Ten or More Years of Tenure with Current Employer**



SOURCE: Bureau of Labor Statistics, Current Population Survey.

# america's dynamic workforce: 2006

reflect the ability of workers to move to different jobs and therefore reflect the dynamism of the American labor market. The 57 million hires and 55 million separations the U.S. labor market witnessed in 2005 were evidence of this dynamism.

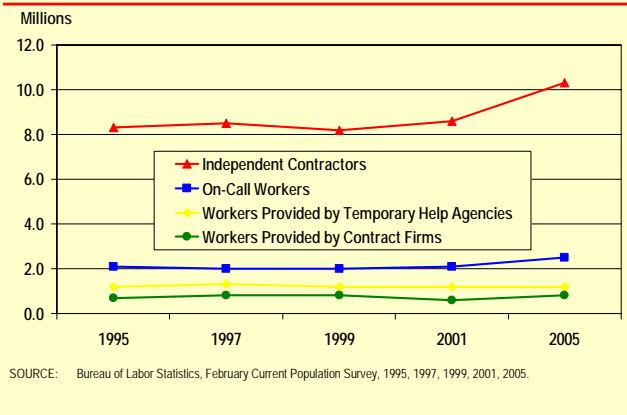
## WORK ARRANGEMENTS

However, flexibility in America's labor market involves more than just changing jobs. Flexibility can also involve customizing various aspects of the job to suit the needs of the establishment and the worker. Flexible work schedules represent one such form of flexibility. Such schedules allow workers to vary the time they begin or end work, and they have become more common. According to BLS, in 2004, 27.5 percent of all full-time wage and salary workers had flexible work schedules, compared to just 15.0 percent in 1991.

Arranging work outside the traditional employment relationship is another tool for flexibility. Such work arrangements can include independent contracting, on-call work, and work for temporary help agencies and contract firms.

As Figure 5-3 illustrates, alternative work arrangements have become more common in recent years. According to the Current Population Survey, in

**Figure 5-3. More Workers Have Alternative Work Arrangements**



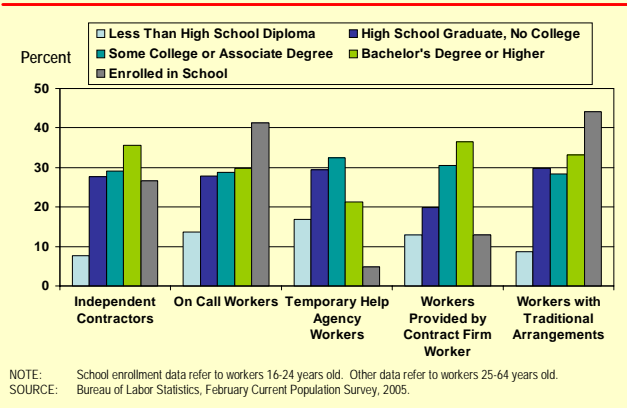
the last decade, the number of workers with alternative arrangements has increased by 21.3 percent, representing about 11 percent of the employed in 2005. Since 2001, the number of independent contractors and on-call workers has risen by almost 20 percent each and the number of contract firm

workers has increased by almost one-third. According to the Current Population Survey, the number of U.S. workers reporting work for temporary help agencies has remained steady. However, data from the establishment-based Current Employment Statistics program suggest that employment in temporary services actually increased by over 8 percent between 2001 and 2005.

Among workers with alternative arrangements, independent contractors are more likely to prefer their work arrangements than other workers; 82.3 percent stated a preference for this type of alternative work arrangement in 2005, about the same as in 1995. However, the proportion of on-call

workers and temporary help agency workers who prefer their alternative arrangement has increased over time. In 1995, 35.8 percent of on-call workers and 26.6 percent of temporary help agency workers preferred their work arrangement to a traditional

**Figure 5-4. Education Patterns Vary by Work Arrangement**



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arrangement, compared to 46.1 percent and 32.1 percent, respectively, in 2005.

Demographic characteristics differ among workers with various alternative work arrangements. Independent contractors are more likely than traditional workers to be white and male. Independent contractors also tend to be older. In 2005, 27.3 percent of independent contractors were age 55 and over, compared to 15.5 percent of traditional workers.

Independent contractors and workers provided by contract firms are more likely than other types of workers, including those with traditional work arrangements, to have a bachelor's degree or higher. At the other end of the education spectrum, temporary help, on-call, and contract firm workers are more likely than traditional workers or independent contractors to have less than a high school diploma. (See Figure 5-4.)

## PART-TIME WORK

Another mechanism for work flexibility is part-time employment. Today, part-time workers (less than 35 hours per week) account for about 17 percent of the workforce. Some part-time workers would prefer full-time work but are unable to find it. However, the vast majority of those who work part-time do so for so-called *noneconomic reasons*, such as to care for family members or to make time for educational pursuits.

Since 1994, among workers who usually work part-time, the proportion of those who do so for noneconomic reasons has held steady at about 8 in 10. (See Figure 5-5.)

Those who usually work part-time for noneconomic reasons are more likely to be women and older. In 2005, 68.5 percent of those who usually worked part-time for noneconomic reasons were women, and 22.7 percent were age 55 or over.

Except for workers provided by contract firms, workers with alternative arrangements are more likely to work part-time than are workers with traditional arrangements. In particular, on-call workers are more likely to work part-time schedules; in 2005, 44.2 percent of on-call workers worked part-time schedules, compared to 16.9 percent of workers with traditional arrangements.

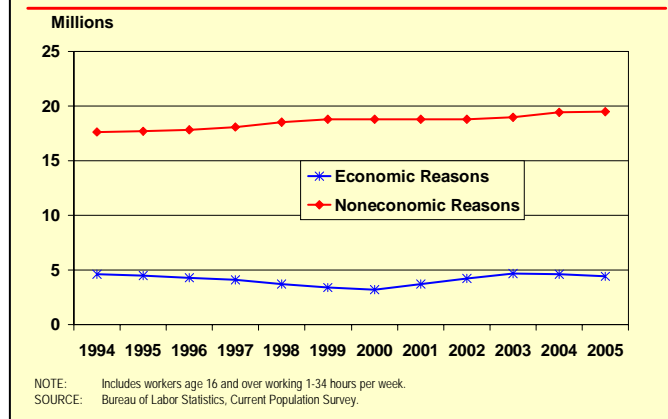
## THE WORK LOCATION

Flexibility can also involve work done at a location different from the traditional workplace. Working at home is a popular alternative for American workers, and many have formal arrangements to be paid for their work at home.

In 2004, 20.7 million persons usually did some work at home as part of their primary job. These workers, who reported working at home at least once per week, accounted for about 15 percent of total nonagricultural employment in May 2004, about the same percentage as in May 2001.

The likelihood of working at home varies greatly by occupation. This is not surprising, since some jobs are more readily done away from the workplace than others. Almost 30 percent of workers in management, professional, and related occupations reported working at home in 2004. About 1 in 5 sales workers usually worked at home. In contrast,

**Figure 5-5. Most Part-Time Workers Work Part-Time for Noneconomic Reasons**



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only 3 percent of workers in production, transportation, and material moving occupations performed job-related work at home. From an industry perspective, workers employed in professional and business services, in financial activities, and in education and health services were among the most likely to work at home in 2004.

Women and men were about equally likely to work at home in 2004, at about 15 percent each. Whites (16 percent) were twice as likely as blacks (8 percent) and Hispanics (7 percent) to work at home, reflecting, at least in part, the relatively higher concentration of whites in occupations that are associated with work at home.

About 3.3 million wage and salary workers, or 1 in 4 wage and salary workers working at home, had a formal arrangement with their employer to be paid for the time they put in at home. About half of these paid home workers spent 8 hours or more per week working at home, and about 1 in 7 put in 35 hours or more per week at home. On average, those with a formal arrangement to be paid for their work time at home logged about 19 hours per week at home, up slightly from 18 hours in 2001.

About one-third of persons who usually worked at home in May 2004 were self-employed. Of the 7.0 million self-employed persons who worked at home, two-thirds had a home-based business – that is, a business run from their home and no other location.

The likelihood of working at home increased with educational attainment. Employed persons 25 years and over with a bachelor's degree or higher were more than 6 times more likely to work at home as those without a high school diploma (32 and 5 percent, respectively). Much of this disparity is due to the varying occupational patterns of workers with different levels of education. For example, college graduates are much more likely to be employed in managerial and professional occupations—which have a greater work-at-home rate—than are high school dropouts. (See Figure 5-6.)

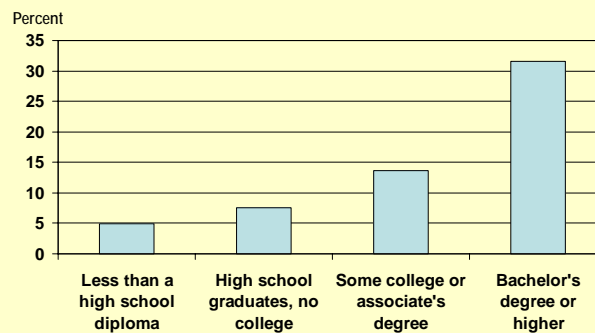
## WHERE FLEXIBILITY WORKS

Certain jobs may be more amenable to particular mechanisms for flexibility. For example, among workers with alternative work arrangements in 2005, independent contractors were more likely to be in management and business, sales, or construction occupations than

were workers with traditional arrangements. Workers provided by contract firms were more likely to be in professional occupations, service occupations, and construction occupations than were traditional workers. Temporary help workers were more likely to be in office and administrative support occupations and in production and transportation occupations than were traditional workers, and on-call workers were more likely to be in professional occupations, service occupations and construction occupations than were traditional workers.

Figure 5-7 shows the proportion of workers with various forms of work flexibility,

**Figure 5-6. Proportion of Workers Working at Home Increases with More Education, 2004**

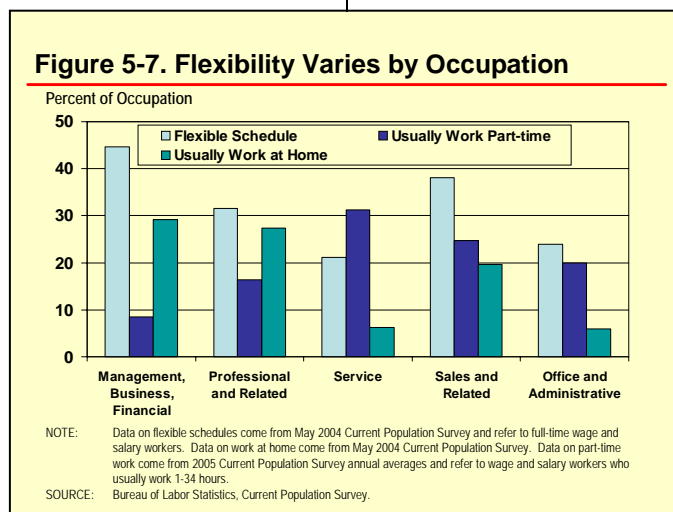


NOTE: Percent of workers 25 years and older who usually worked at home at least once a week.  
SOURCE: Bureau of Labor Statistics, Current Population Survey.

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stratified by selected occupations. Flexibility in the form of flexible scheduling and work at home are more common in management, sales, and professional occupations, while working part-time for noneconomic reasons is more common in sales, service, and office occupations. These forms of flexibility tend to be less common in production, transportation, and related occupations (not shown).

Clearly, flexibility in the workplace can take many forms and can involve combinations of arrangements to suit the needs of the worker



and the requirements of the job. Because flexibility involves tailoring to the job as well as the worker, it can vary greatly by occupation.

Flexibility in its many forms will continue to be a key factor in maintaining a dynamic U.S. workforce. While dramatic changes in how work is done

have yet to be realized, employers and workers will need flexibility to respond and adapt to changes in the global economy as well as technological innovations, allowing new opportunities for when, where, and how we work.

## 6 Opportunities to Prosper

Experience shows that America's economy likely will continue to face challenges arising from technological innovation, globalization, demographic trends, natural disasters, and political events. However, the flexible and dynamic nature of our labor market enables America's workers to grasp the opportunities presented by these changes. In recognizing opportunities to succeed in the workforce, America's workers strengthen our economy at the same time. This chapter examines opportunity in the American labor market from three perspectives: the effects of an aging population, the expanding role of women, and the experience of racial and ethnic minorities.

### AGING POPULATION

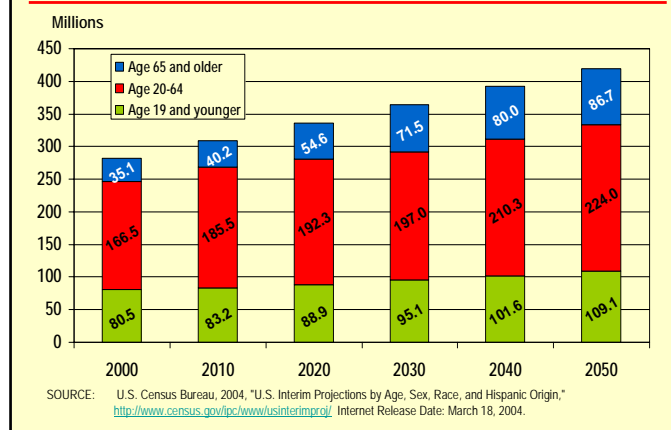
The changing age composition of the U.S. population is a challenge that also presents a source of opportunity for the U.S. labor market. As Figure 6-1 shows, the proportion of the population ages 65 and older is projected to grow from about 12.4 percent of the total population in 2000 to about 20.7 percent in 2050. The Baby Boom generation is now just beginning

to turn 60 years of age, but over the next several years, all 78.2 million of them will pass that milestone, moving into the traditional age of retirement. The population next in line is today's 20 to 39 year olds, and there are about half a million fewer of them, according to 2005 Census estimates. The growing size of the aging population relative to the younger population may contribute to better job market conditions for younger workers in terms of lower unemployment rates and more job openings.

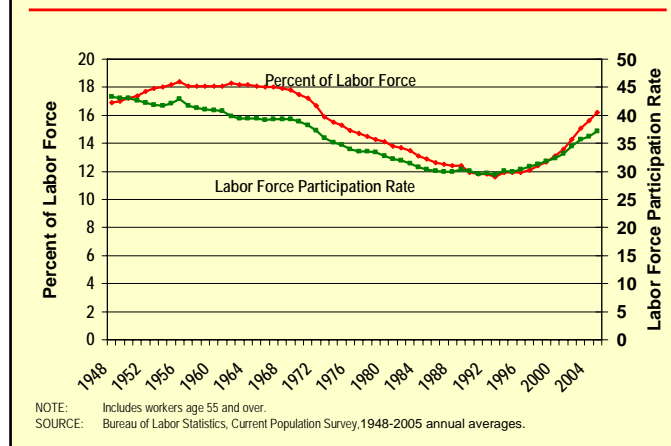
An aging population leads to an aging workforce. In the last several years, workers age 55 and older have represented a growing share of the labor force, growing from 11.6 percent in 1993 to 16.2 percent in 2005. Over the same time, the labor force participation of workers age 55 and older has increased from 29.4 percent to 37.2 percent. (See Figure 6-2.)

In the future, America's older workers – who will be more educated than previous generations of older workers – may remain in the labor force longer, thereby increasing the typical

**Figure 6-1. The U.S. Population Is Aging**



**Figure 6-2. Older Workers in the Labor Force**





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age of retirement. Still, as older workers maintain their attachment to the labor force, they may desire more flexibility and more non-traditional work relationships. As much as any other group of workers, older workers may benefit from the opportunities afforded by alternative work arrangements, such as part-time schedules and temporary and contract work. Therefore, these arrangements may become even more important as employers provide the flexibility to retain productive older workers.

## WOMEN IN THE DYNAMIC LABOR FORCE

Likewise, over the last several decades, women have taken advantage of the opportunities presented by America's dynamic labor market. Women's labor force participation rate was 32.7 percent in 1948. Over the years it increased steadily, from 46.3 percent in 1975 to a peak of about 60 percent in 2000. (See Figure 6-3.) At 59.3 percent in 2005, the labor force participation rate of women has plateaued since 2000.

More women than ever are in higher-paying occupations. Figure 6-4 shows data from a specially constructed series that estimates women's employment in occupations over time.<sup>22</sup> The data show that women's share of employment in professional and related occupations

and in management, business and financial operations occupations has steadily risen over time.

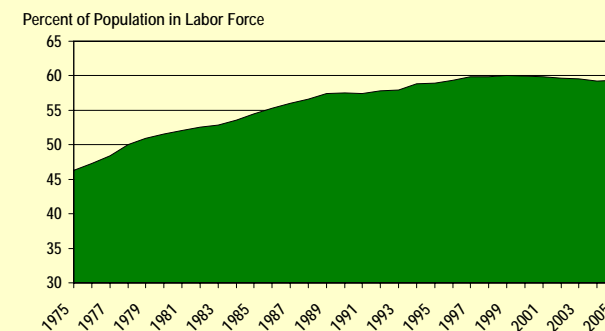
Women represented 50.7 percent of all professional and related occupations in 1983 but represented 56.3 percent in 2005.

Women have also made progress in management occupations. In 1983, women comprised 31.2 percent of workers in management, business and financial operations occupations. By 2005, the proportion of women in such occupations had grown to 42.5 percent.

Throughout the last several decades, women's earnings have increased as a proportion of men's earnings. At 81.0 percent in 2005, the ratio of women's earnings to men's has risen by more than 18 percentage points since 1979, when it stood at 62.5 percent. In 2005, women's median weekly earnings were \$585 for full-time workers, compared to \$722 for men.

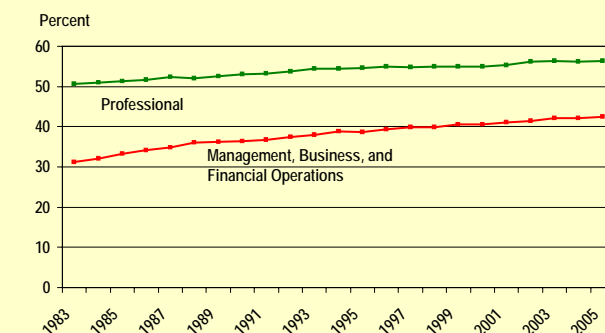
Women's earnings are now, on average, much closer to men's earnings, although some difference remains. However, simple earnings averages for men and women do not account for many factors that can explain earnings differences, such as educational attainment, occupational choice, hours of work, job

**Figure 6-3. Women's Labor Force Participation Over the Past 30 Years**



SOURCE: Bureau of Labor Statistics, Current Population Survey, 1975-2005 annual averages.

**Figure 6-4. Proportion of Women in Professional and Management Occupations**



NOTE: Data use the specially constructed conversion series available online at <http://www.bls.gov/cps/constio198399.htm>.  
SOURCE: Bureau of Labor Statistics, Current Population Survey, 1983-2005 annual averages.

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tenure, and other factors.

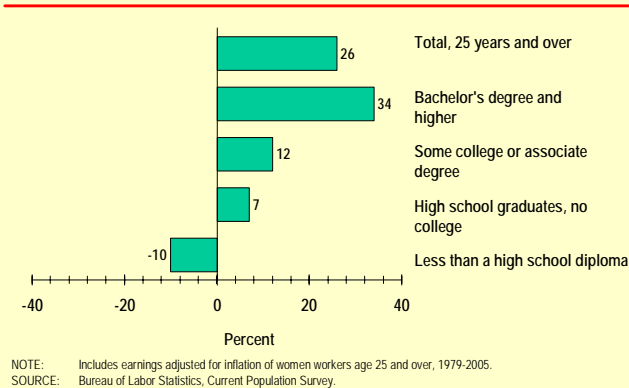
The progress of women in the U.S. labor market highlights the vital role of education and the opportunities available to those who pursue it. Overall, real (inflation-adjusted) earnings of women 25 years and over increased by over one-fourth from 1979 to 2005, while real earnings of men changed very little. At all levels of education, changes in real earnings since 1979 have been more favorable for women than for men.

However, as Figure 6-5 illustrates, women's gains in earnings varied significantly by educational attainment, and women with more education experienced larger gains in real earnings. Indeed, women without a high school education experienced lower earnings after adjusting for inflation, while those with higher levels of education experienced higher earnings over time even after adjusting for inflation.

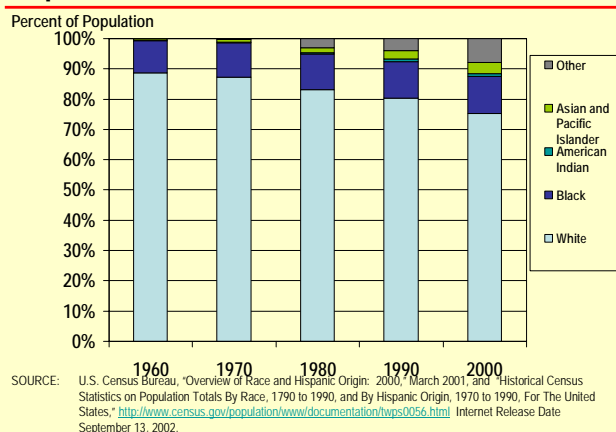
## MINORITY POPULATION GROWTH

The increasing racial and ethnic diversity of the U.S. population also will create new opportunities as well as challenges for the U.S. labor market, and education will play a vital role. As shown in Figure 6-6, the proportion of the population (all ages) whose race is

**Figure 6-5. Women's Real Earnings Have Increased More with More Education**



**Figure 6-6. Growing Racial Diversity in the U.S. Population**



classified as "white" has decreased from almost 9 in 10 in 1960 to about 3 in 4 in 2000. When Hispanic ethnicity is considered in addition to race, the U.S. population's diversity is further underscored: In 2005, about one-third of the country's population belonged to either a racial or ethnic minority group.

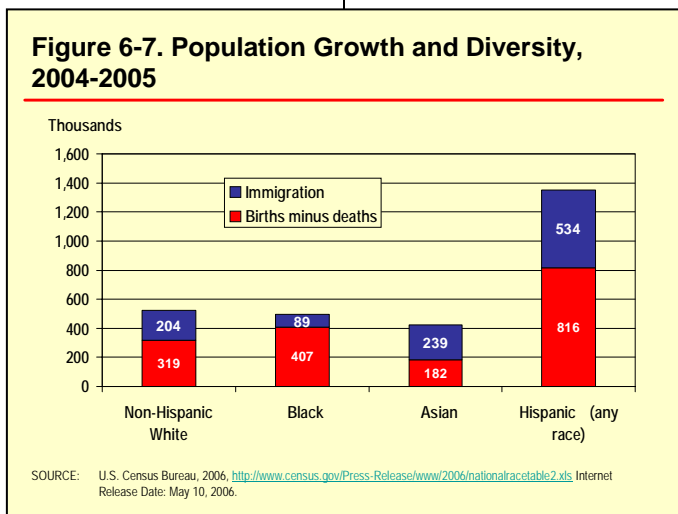
Greater population diversity naturally results in greater diversity among U.S. workers. In 2005, about 17.5 percent of the U.S. labor force identified themselves racially as other than "white," including 11.4 percent (17.0 million) who identified themselves

as black or African-American and 4.4 percent (6.2 million) who identified themselves as Asian or Pacific Islander. In 2005, 13.3 percent (19.8 million) of the labor force identified themselves as Hispanic (or Latino).

Immigration is a factor in the growing role of racial and ethnic minorities, but natural increase – native-born Americans – is also an important source for growth of the minority population. The 2.9 million estimated increase in total population (all ages) between 2004 and 2005 included 1.1 million immigrants and 1.7 million native births. Of these, 1.4 million of the native births were of minority race or ethnicity.

# america's dynamic workforce: 2006

Figure 6-7 shows in detail the estimated increase from 2004 to 2005 of the U.S. population from both births and immigration by racial and ethnic categories. From 2004 to 2005, the Hispanic population grew by over 1.3 million, with about 39.5 percent of that growth due to immigration. The black population increased by almost half a million over the year, with 18.0 percent of the growth due to immigration. The Asian population increased by 421,000 over the year, with 56.7 percent of the increase due to immigration. By comparison, the non-Hispanic white population increased by half a million, with 39.0 percent of the increase due to immigration.



## MINORITIES SHARE IN LABOR MARKET OPPORTUNITIES

The strong labor market in 2005 benefited American workers across all categories of race and ethnicity. Average annual employment of black (or African-American), Asian (or Pacific Islander), and Hispanic (who may be of any race) workers rose in numbers and as a percent of the total employed in 2005. The number of black (or African-American) workers in 2005 was 15.3 million, up 404,000 from 2004, and they comprised 10.8 percent of total

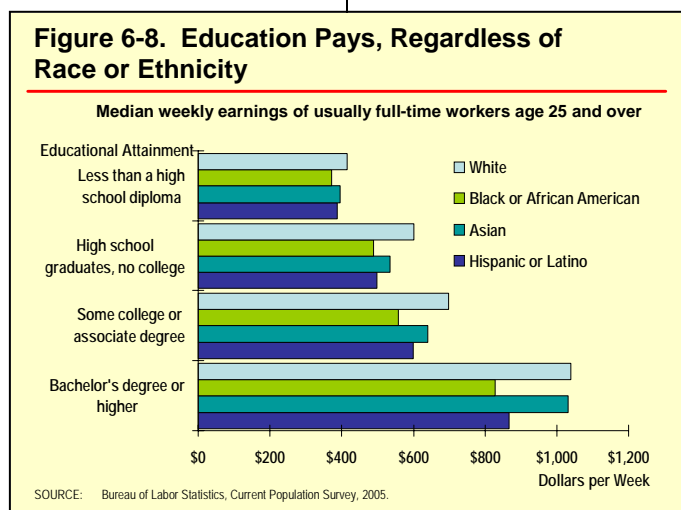
employment. The number of Asian (or Pacific Islander) workers increased 250,000 to 6.2 million in 2005, and they comprised 4.4 percent of total employment. Hispanic workers (who may be of any race) numbered 18.6 million in 2005.

Unemployment rates fell in 2005 across all

racial and ethnic categories. The unemployment rate for blacks (or African-Americans) fell from 10.4 percent in 2004 to 10.0 percent in 2005. For Asian (or Pacific Islander) Americans, the unemployment rate fell from 4.4 percent in 2004 to 4.0 percent in 2005. For Americans of Hispanic ethnicity, the unemployment rate fell from 7.0 percent in 2004 to 6.0 percent in 2005.

## EDUCATION PAYS FOR MINORITIES

For workers of all races or ethnicity, education plays a vital role in the labor market. Across all racial and ethnic categories, higher levels of educational attainment are associated with higher earnings and lower unemployment rates. Figure 6-8



shows that, regardless of race or Hispanic ethnicity, college graduates earn substantially more than do high school graduates and more than twice as much as high school dropouts.

Comparing 2005 median weekly earnings of those who usually work full

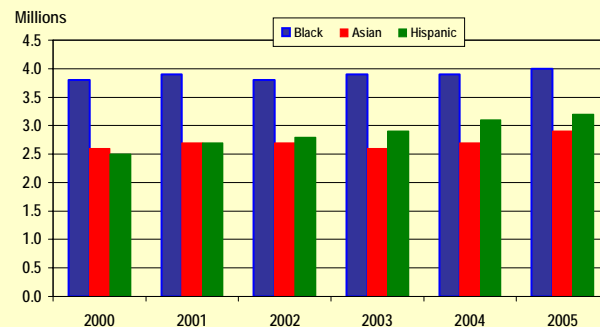
# america's dynamic workforce: 2006

time (age 25 and over), the earnings premium for a bachelor's degree or higher versus less than a high school diploma was

- 151.0 percent (\$625 per week) for Whites;
- 122.6 percent (\$456 per week) for Blacks or African Americans;
- 160.4 percent (\$635 per week) for Asians; and
- 123.2 percent (\$478 per week) for Hispanics or Latinos.

Figure 6-9 shows that the number of minority workers employed in professional and management jobs, which tend to be

**Figure 6-9. Racial and Ethnic Minorities in Professional and Management Jobs**



SOURCE: Bureau of Labor Statistics, Current Population Survey, 2000-2005 annual averages.

higher-paying jobs requiring higher levels of education, has steadily increased in recent years. Encouraging educational attainment for all U.S. workers will be a critical component of the continued success of the country's dynamic workforce.

Opportunity is a core value for Americans, and America's dynamic labor market is a key source of opportunity. The American economy rewards effort, initiative, knowledge, experience and innovation. Strong employment growth, low unemployment, and good wages provide all Americans opportunities to prosper.

## End Notes

1 The Bureau of Labor Statistics publishes two distinct but complementary employment series. Nonfarm payroll employment is based on a survey of establishments and total employment is based on a survey of households.

2 The calculation is from the peak payroll employment level nearest to the NBER declared beginning of the recession to the employment nadir following the recession. For the 1981-82 recession, the peak was 91,594,000 in July 1981 and the nadir was 88,756,000 in December 1982, a decline of 3.098 percent. For the 1990-91 recession, the peak was 109,820,000 in June 1990 and the nadir was 108,203,000 in May 1991, a decline of 1.472 percent. For the 2001 recession the peak was 132,551,000 in February 2001 and the nadir was 129,797,000 in August 2003, a decline of 2.078 percent.

3 Hires include re-hires of laid off employees and transfers of employees to other establishments operated by the same employer.

4 \$12.455 trillion according to the BEA revised estimate published in July 2006.

5 GDP growth rates reflect BEA benchmark revisions published in July 2006.

6 To the extent that higher compensation costs for health care benefits may not have been reflected in higher quality or quantity of health care services received, higher cost of compensation for employers may not equate with higher value perceived by employees.

7 Based on annual average for 2005 of quarterly estimates from the BLS National Compensation Survey, Employer Cost of Employee Compensation reports. Occupations in the graph are ranked according to 2005 annual average hourly compensation.

8 Based on annual average of monthly employment levels for each occupational group estimated from the Current Population Survey.

9 In addition to the occupations shown in the chart, the Farming, fishing and forestry occupations group experienced an employment decline of 76,000. This group was not included in the chart because ECEC data to rank hourly compensation was not available.

10 The members of the European Monetary Union are Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain

11 All European Union figures for the rest of the chapter will be for the 15 member countries prior to the latest expansion on May 1, 2004: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Denmark, Sweden and the United Kingdom. In part, this focus results from a lack of statistical data covering the current 25-member European Union.

12 Employment data date from January 1990.

13 Kilcoyne, Patrick. "Occupations in the Temporary Help Services Industry," *Occupational Employment and Wages*, May 2004, Bureau of Labor Statistics Bulletin 2575.

14 Strople, Michael H. "From supermarkets to supercenters: employment shifts to the one-stop shop," *Monthly Labor Review*, February 2006.

15 The sum of quarterly gross job gains and gross job losses for a length of time (such as 10 years) measures the number of jobs gained and lost *during* that period and not *over* the period.

16 Some of the gross flows of jobs gained and lost reflect seasonal fluctuations that repeated year after year and add to the multi-year aggregates of gains and losses (the quarterly data used were not adjusted to remove seasonal effects), but some of the aggregate job gains and losses represent more lasting gains that partly offset closures and downsizing.

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17 The data comparison in the section and in Figure 3-8 is based on a special conversion series developed by BLS. The specially constructed data series available online at <http://www.bls.gov/cps/constio198399.htm> provides a set of occupational definitions for CPS data from 1983 to 1999 that is consistent with new occupational categories introduced in 2000

18 Degree status is implied but not certain for 1970-91 data. Prior to 1992, the Current Population Survey questionnaire asked for years of school attended and whether the terminal year was completed. Beginning in 1992, the CPS questionnaire explicitly asks about receipt of a high school diploma, GED certificate, or college degree.

19 Data are annual averages of quarterly median earnings for wage and salary workers ages 25 or older who usually worked full-time.

20 Data are annual average of monthly survey results. Because of movements in and out of the labor force during the year, the number of distinct persons with some labor force activity during the year would be somewhat higher for all categories than the average.

21 See the BLS publication "Number of Jobs Held, Labor Market Activity, and Earnings Growth Among Younger Baby Boomers: Results from a Longitudinal Survey," USLD 04-1678, August 25, 2004. [www.bls.gov/news.release/pdf/nlsoy.pdf](http://www.bls.gov/news.release/pdf/nlsoy.pdf)

22 The specially constructed data series available online at <http://www.bls.gov/cps/constio198399.htm> provides a set of occupational definitions for CPS data from 1983 to 1999 that is consistent with new occupational categories introduced in 2000.





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