



C H A P T E R 6

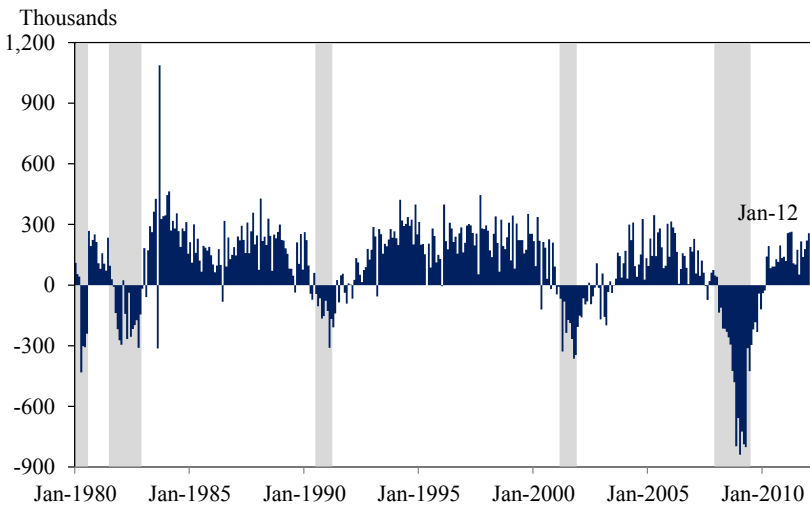
JOBS AND INCOME: TODAY AND TOMORROW

Recessions caused by financial crises typically cause large declines in aggregate demand, as households that have borrowed excessively during the boom years bring down their debt during and after the recession. This deleveraging cycle takes time and disrupts the labor market, because reductions in consumer spending mean that employers require fewer workers to satisfy customer demand. Long-term problems that have been building over several decades pose a further set of challenges for the labor market. Inequality was sharply rising and earnings were stagnant for middle-income families for many years before the latest recession. And job growth from the end of the 2001 recession through 2007 was the weakest for any recovery in more than five decades. The Great Recession exacerbated these problems.

Despite the severe damage caused by the recession that began in December 2007, the labor market is gradually improving. Sustained private-sector job growth resumed more quickly after the official end of the 2007–09 recession than it did after the two previous recessions (Figure 6-1). Private employers have now added jobs, on net, every month since February 2010. In 2011, 2.1 million private-sector jobs were added to the economy, the most in any year since 2005. But, given the depth of the 2007–09 recession, the recovery has not yet resulted in enough new jobs to replace all of those that were lost.

Continuing the recovery is essential to putting more Americans back to work. And even as the economy and job market recover, long-term trends that predate the recession continue to pose a challenge for American families and businesses. Responding to these challenges, the President has proposed measures that independent economists predict would create millions of jobs. To make sure that Americans are equipped to compete in the economy of the future, the President has also taken steps to improve K–12 education and to make college more accessible and affordable for middle-class families,

Figure 6-1
 Monthly Change in Private-Sector Employment, 1980–2012



Note: The large fluctuations in private-sector employment in 1983 were due to strike activity. Shading denotes recession.

Source: Department of Labor, Bureau of Labor Statistics.

actions that should help to mitigate the long-term trend of growing income inequality.

JOBS AND EMPLOYMENT

The traditional pattern has been that as both the U.S. economy and population have grown, so too has the number of jobs filled by American workers. Between January 1980 and July 1990, from business-cycle peak to business-cycle peak, total U.S. employment grew by an average of 151,000 net new payroll jobs a month; it grew even more quickly, at a rate of 178,000 payroll jobs a month, between July 1990 and March 2001, again from business-cycle peak to business-cycle peak. But this long-term pattern of job growth changed around the turn of the millennium. Between March 2001 and December 2007, the economy added a monthly average of only 68,000 total jobs and only 50,000 private-sector jobs. U.S. job creation slowed even as productivity growth remained relatively strong, and even as other developed countries, such as the United Kingdom and Canada, maintained robust job growth.

Against this backdrop of weak employment growth beginning in about 2000, the economy fell into recession in December 2007 and began to shed jobs at the end of 2008 at a rate unprecedented in the postwar era.

During 2008 and 2009, the economy lost an average of 361,000 jobs a month, reaching a high of 818,000 jobs in January 2009. As the recession continued, the unemployment rate doubled, from 5.0 percent in April 2008 to a peak of 10.0 percent in October 2009, a rate not seen since 1983 (Figure 6-2).

Soon after the President signed the American Recovery and Reinvestment Act (Recovery Act) on February 17, 2009, the pace of job loss slowed. The private sector has added jobs in each of the past 23 months, registering a cumulative gain of 3.7 million jobs since February 2010, including 2.1 million jobs in 2011. Private-sector job growth has averaged 159,000 jobs per month since February 2010, and 218,000 jobs per month in the last three months (ending in January 2012).

The recession has had a large and continuing negative fiscal impact on State and local governments, however, and they continue to shed workers, thus offsetting some of the private-sector job growth. Nonetheless, with the support provided by the Recovery Act and by the payroll tax cut and unemployment insurance extensions contained in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, the U.S. economy has added jobs in every month since February 2010, excluding temporary Census hires. The continuing recovery has brought the unemployment rate down from a peak of 10.0 percent in October 2009 to 8.3 percent in January

Figure 6-2
Unemployment Rate, 1980–2012



Note: Shading denotes recession.

Source: Department of Labor, Bureau of Labor Statistics.

2012. The 0.9 percentage point decline in the unemployment rate that occurred in 2011 is the largest in any calendar year since 1994.

The pace of the recovery has varied across sectors of the economy, with those sectors most harmed by the financial crisis the slowest to recover. Since February 2010, when the private sector began consistently adding jobs, job growth has been strong in industries such as education and health services (+717,000 jobs as of January 2012); trade, transportation, and utilities (+683,000 jobs); and manufacturing (+400,000), but is still weak in some sectors, notably construction (+43,000 jobs) and State and local government (-456,000 jobs). The continued weakness in these two sectors reflects the severity of the financial crisis and the recession's impact on the housing market and on government revenues.

The pace of recovery has also differed across demographic groups. The Hispanic unemployment rate reached a peak of 13.1 percent twice, first in August 2009 and then again in November 2010. The unemployment rate for African Americans reached 16.7 percent in March 2010 and then again as recently as August 2011. The unemployment rates for Hispanics and African Americans as of January 2012 are well below their respective peaks—down 2.6 percentage points for Hispanics and 3.1 percentage points for African Americans—but still remain elevated.

Trends in the labor force participation rate and in the employment-to-population ratio that pre-date the recession, and were exacerbated by the recession, are a continuing concern. After trending upward for most of the post-World-War-II period, largely because of increases in the fraction of women in the labor force, the participation rate has been in a secular decline since the late 1990s, driven by declining participation of Americans between the ages of 16 and 54, as well as by the aging of the workforce. These same developments have also lowered the employment-to-population ratio. The labor force participation rate fell further in the recession. As discussed in Chapter 2, many of those who have left the labor force since the beginning of the recession have enrolled in school.

Extended unemployment insurance benefits have encouraged workers who lost their jobs through no fault of their own to keep searching for work, thereby maintaining a connection to the labor force. Helping more Americans get back to work more quickly remains the top priority of the Administration's economic policy. That is why, in September 2011, President Obama proposed the American Jobs Act to support and speed up the ongoing recovery for American workers and their families. More recently, the President's 2012 State of the Union Address and Fiscal Year 2013 Budget laid out a blueprint for an economy built to last on American manufacturing, American energy, skills for American workers, and American values.

THE DYNAMICS OF LABOR MARKET TRENDS

Underlying the changes in employment is a dynamic process through which firms are born and die, jobs are gained and lost, and workers transition in and out of employment and between jobs. These labor market dynamics have strong cyclical properties that have been very much at work during and since the recession, but secular trends are also changing the functioning of the U.S. labor market over the long run.

Job Dynamics

The job market is dynamic, with new firms entering and others exiting, and some growing and others contracting. The dynamic job market is supported by a safety net that helps to protect workers when job transitions do not occur smoothly and that gives entrepreneurs a backstop when they take risks with potentially high payoffs in future productivity. The importance of the many facets of the safety net is discussed in detail in Chapter 7.

These job dynamics are characterized by gross flows of job gains and job losses across firms. Gross job gains are measured as jobs created in new and expanding firms, while gross job losses are measured as jobs that disappear in firms that are contracting or closing.¹ Net job growth in a given period is the difference between gross job gains and gross job losses:

$$NET_t = G_t - L_t$$

where

$$G_t = \sum_{i \in C} (N_{it} - N_{it-1}) \quad \text{and} \quad L_t = \sum_{i \in D} (N_{it-1} - N_{it}),$$

and NET_t is the net number of jobs created by firms in the economy in period t ; G_t is the amount of gross job gains in the period; L_t is the amount of gross job losses; i is a firm; C is the set of firms that are either new or have grown in period t ; D is the set of firms that have either exited or contracted in period t ; and N is the number of jobs.

To calculate the rates of net job growth, gross job gains, and gross job losses, each of these values is divided by overall employment in the economy

¹ Alternative measures of gross job gains and gross job losses use units of observation other than the firm, such as the establishment, generally a physical location of business activity where goods and services are produced. Using units smaller than firms leads to higher rates of gross gains and losses because jobs that flow across the units within a firm are counted in the gross measures.

averaged between one period and the next period. So, for example, the rate of gross job gains in period t is:²

$$GR_t = \frac{G_t}{0.5 * (N_t + N_{t-1})}$$

Recent work by economists using the Business Dynamic Statistics (BDS) data at the U.S. Census Bureau demonstrates the tremendous dynamism of private-sector employment in the United States (Haltiwanger, Jarmin, and Miranda 2010; Haltiwanger 2011). Between 1980 and 2009 (the most recent year of BDS data), approximately 17 percent of all jobs in the private sector in an average year were added in that year at new or expanding firms; approximately 15 percent of jobs in an average year were gone by the next year because firms closed or contracted. While both large and small firms contribute to gross job gains and losses, small firms tend to gain and lose jobs disproportionately and to account disproportionately for net job growth.

Recent research suggests that an important part of the explanation for the disproportionate amount of both gross job gains and gross job losses accounted for by small firms is that they tend to be young. Put differently, startups and other young firms drive the large rates of job gains and losses in small firms. Between 1980 and 2009, for example, 18.2 percent of overall gross job gains each year were in new firms—mostly small new firms—even though new firms accounted for only 3.1 percent of employment (Data Watch 6-1). These numbers make clear the importance and contribution of America’s entrepreneurs to the dynamism of the economy.

The annual average rates of job gains and losses between 1980 and 2009 mask two important features of heterogeneity across time—secular, or long-term, trends, and cyclical patterns. The rates of both gross gains and gross losses have been declining over time. Whereas, on average, 18.2 percent of private-sector jobs in the 1980s were newly created positions in startups or expanding firms, gross job gains fell to 16.8 percent of total private-sector employment in the 1990s and to 15.8 percent between 2000 and 2009 (Figure 6-3). Similarly, gross job losses were slightly more than 16.2 percent of overall private-sector employment in the 1980s but fell to 14.9 percent in the 1990s and then remained largely the same between 2000 and 2009. These secular declines also are apparent when one focuses more narrowly on startups. Gross job gains from startups accounted, on average,

² The data on U.S. firms capture gross flows over a 12-month period beginning and ending in March. So, for example, the rate of job gains in year $t=2009$ refers to information on jobs gained in firms between March 2008 and March 2009.

Data Watch 6-1: Measurement of Startups

Research based on a new Census Bureau data set called the Longitudinal Business Database (LBD) has led to new discoveries about the important role that startups play in creating jobs. The LBD contains annual information on virtually the entire universe of U.S. nonfarm private businesses that paid Federal payroll and income taxes between 1976 and 2009, and it will continue to be updated as new data become available.

LBD data are available both at the level of the firm—a measurement unit combining all of the economic activity of a business that occurs under common operational control—and at the level of individual establishments—physical locations of economic activity where goods and services are produced. The initial data are derived from quarterly Internal Revenue Service filings that are compiled by the Census Bureau and augmented with data collected through the Census Bureau Economic Censuses and business surveys. The final LBD data set contains annual information on payroll, employment size, industry, and other key economic variables for both firms and establishments.

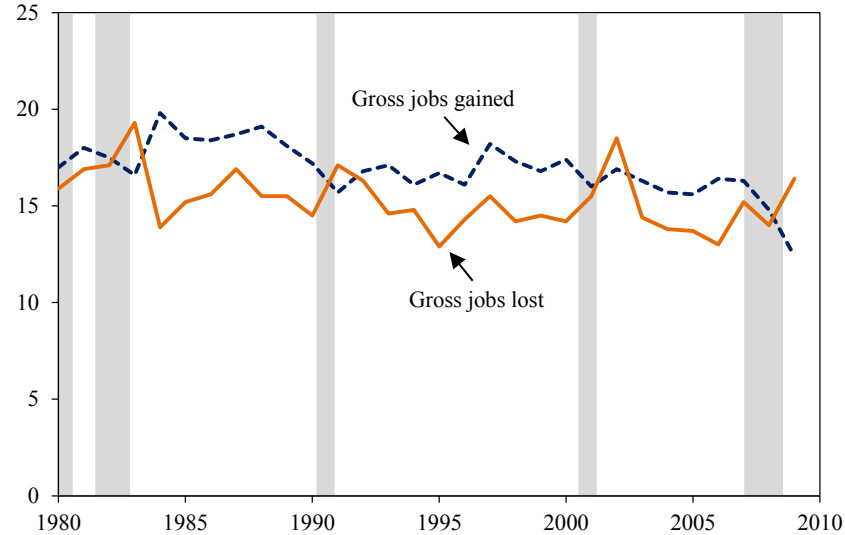
One of the key advances of the LBD is its ability to track the births and deaths of firms. When a new economic entity is reported in the administrative sources used to create the LBD, the Census Bureau determines whether that new economic entity is a new firm, a new establishment that is part of an existing firm, or an establishment that has undergone a change in legal form because of a merger, change in ownership, or some other similar change. Through this process, the Census Bureau is able to identify essentially all new private payroll startups.

The creation of the LBD has allowed researchers to study comprehensively the process of private-sector job gains and losses. One of the most important findings has been how important startups are to the dynamism of the U.S. economy. For example, Haltiwanger, Jarmin, and Miranda (2010) find that about 2.5 million net new private-sector jobs were gained in 2005. Firm startups created nearly 3.5 million net new jobs in that year, while all other firms together lost about 1 million jobs on net.

More information on the LBD is available from the Census Bureau at http://www.ces.census.gov/index.php/bds/bds_home. The Bureau of Labor Statistics has produced a separate database, the Business Employment Dynamics (BED), which tracks gross quarterly job gains and losses; more information about the BED is available at <http://www.bls.gov/bdm>.

Figure 6-3

BDS Estimates of Annual Gross Job Gain and Loss Rates, 1980–2009
Percent of total U.S. private-sector jobs



Note: Shading denotes recession.
Source: Census Bureau.

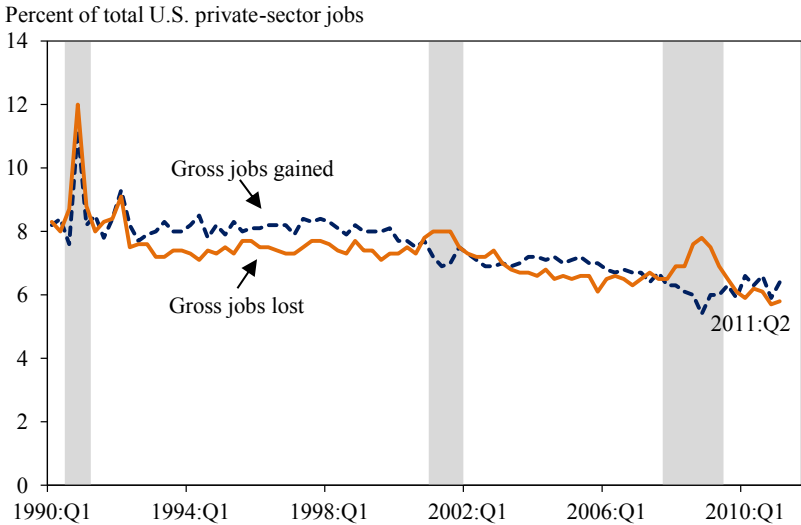
for 3.6 percent of the overall number of private-sector jobs in the 1980s but for only 2.7 percent between 2000 and 2009.

The rates of gross job gains and losses exhibit not only secular declines but cyclical patterns as well. Gross job gains are procyclical, increasing in expansions and declining in recessions, whereas gross job losses are countercyclical, increasing during recessions and declining in expansions. In the depths of the recent recession, gross job losses rose sharply, but the decline in gross job gains was even more notable.

An alternative data set produced by the Bureau of Labor Statistics (BLS) offers more frequent and more recent data than the BDS. The Business Employment Dynamics (BED) reports quarterly data on payroll employment at the level of the Employer Identification Number (EIN). An EIN is a tax-reporting construct rather than an economic construct, but the unit of observation in the BED consists in most cases of all of the operations of a particular firm located within a given U.S. state. Movements in gross job gains and losses in the BED on an annualized basis since its 1990 inception are broadly similar to those in the BDS; most important, the BED also shows a trend decline in gross gain and loss rates since 2000.

The quarter-to-quarter movements shown in Figure 6-4, which are based on BED data through the second quarter of 2011 (the most recent quarter of data available), show a large increase in the rate of gross job losses toward the beginning of the recession; the rate reached a peak in the

Figure 6-4
 BED Estimates of Quarterly Gross Job Gain and Loss Rates,
 1990–2011



Note: Shading denotes recession.

Source: Department of Labor, Bureau of Labor Statistics.

first quarter of 2009, and then returned to approximately the pre-recession trend by the beginning of 2010. The BED data also show a precipitous fall in the rate of gross job gains during the recession, and although that decline reversed and gross job gains exceeded gross job losses by the second quarter of 2010, the gains so far have resulted in too few new jobs to accommodate the large number of individuals who lost jobs in the 2007–09 recession.

Now that researchers have documented the long-term secular slowdown in job gains and losses, the underlying reasons for the slowdown and its implications for the future of the U.S. economy are fast becoming the subject of an active debate. One possible reason for the slowdown in job reallocation is the aging of the population. Older workers may be less likely to become entrepreneurs, and research has documented a positive correlation between worker age and job tenure (Davis et al. 2007; Krueger 2010). But while the U.S. population is indeed aging, it is and will remain much younger than the population in the countries of Western Europe. So, to the extent that aging can explain part of the slowdown in job flows in the United States, other countries can be expected to experience slowdowns as well. Further research is needed to better understand the secular trends in job flows in the United States, and international comparisons could be helpful in this regard.

Because of the importance of entrepreneurship to the vitality of the economy, the President last year launched Startup America, a national

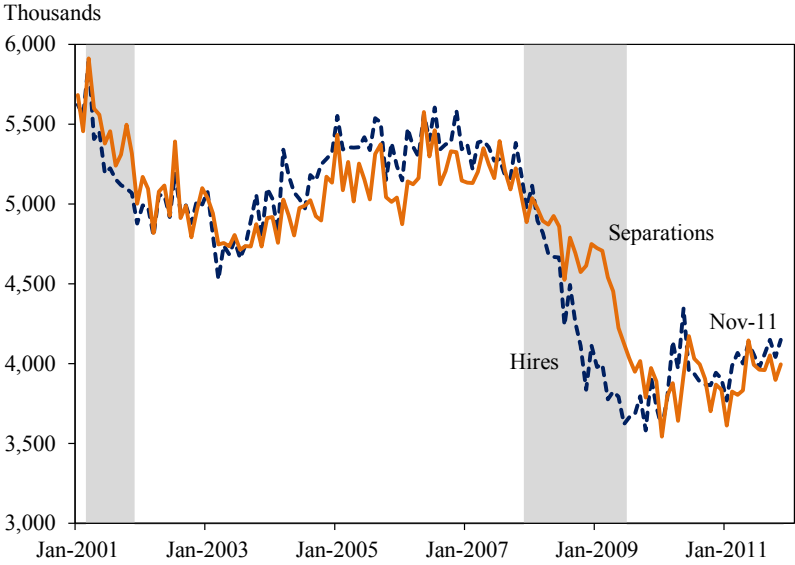
campaign to improve the environment for high-growth entrepreneurs by expanding their access to capital and connecting them with mentors, helping the Nation’s veterans start businesses, reducing barriers to entrepreneurship, and fostering entrepreneurship in communities.

Worker Flows

The reallocation of jobs across firms is accompanied by the flows of individual workers between firms and in and out of employment. Overall, the net change in employment at a firm must by definition equal the difference between the firm’s hires and separations. But the rates of worker flows are larger than the rates of job reallocation: a firm may maintain stable employment (no gross job gains or losses) from one year to the next while having many individual workers come and go from within its employee ranks.

On a monthly basis, flows of workers into firms (hires) and out of firms (separations) are large. As captured since December 2000 in the BLS Job Openings and Labor Turnover Survey, hires and separations have both averaged more than 4.7 million a month and have tended to track each other closely over time. As Figure 6-5 illustrates, firm hires and separations before the start of the recession in 2007 were notably below the levels observed before the start of the 2001 recession.

Figure 6-5
Hires and Separations, 2001–2011

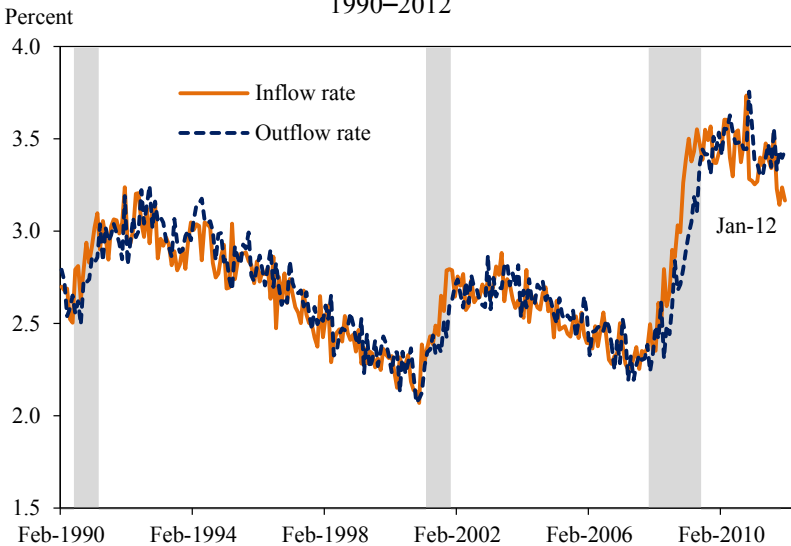


Note: Shading denotes recession.
Source: Department of Labor, Bureau of Labor Statistics.

As the U.S. economy fell into recession in December 2007, worker flows slowed notably, with large monthly declines in the number of separations, and even more precipitous monthly declines in the number of hires. A decline in separations during a recession may seem counterintuitive, but it is attributable to a large decline in the frequency of workers quitting their jobs; quits are usually a sign of workers leaving jobs voluntarily for better opportunities. So while layoffs were increasing over this period, the decline in quits swamped the increase in layoffs. Overall, the economy on net was shedding jobs at a very fast pace during the recession because the decline in hiring in absolute numbers was larger than the decline in separations. Hires and separations both began to rise in the second quarter of 2010, but both remained below pre-recession levels at the end of 2011.

One can also study flows of workers into and out of employment, unemployment, and the labor force. Perhaps most important over time are the flows into and out of unemployment, which can be calculated using the Current Population Survey (CPS). Because of the structure of the CPS, in any given month three-quarters of the sample members have also been interviewed in the previous month, making it possible to use these repeat respondents to follow transitions into and out of unemployment. The BLS has been constructing these flows each month since 1990 in a manner that also matches up with the level of reported unemployment. Figure 6-6

Figure 6-6
Flows into and out of Unemployment as Percent of the Labor Force,
1990–2012



Note: Shading denotes recession.

Source: Department of Labor, Bureau of Labor Statistics.

displays the extent of inflows and outflows as a percent of the total labor force for each month from the start of 1990 through January 2012.

Although the BLS labor force flow series goes back only to 1990 and is dominated by strong cyclical movements, the data in Figure 6-6 through the end of 2007 suggest a secular decline in both the inflow and outflow rate. A similar decline has also been documented elsewhere (see, for example, Davis, Faberman, and Haltiwanger 2006) for years before 1990, using alternative methods of calculating unemployment inflows and outflows. As with job flows, the aging of the population may account for some of these secular declines, because older workers tend to leave jobs less often than younger workers and, when they do, are more likely to leave the labor force permanently. But the declining flows into and out of unemployment also may reflect other forces that have lowered the rates of gross job gains and losses over the past three decades.

As the recession began, monthly inflows and outflows from unemployment both stood at approximately 2.4 percent of the labor force. Both began to rise steeply, but the inflow rate rose more quickly than the outflow rate, increasing the unemployment rate to levels not seen in approximately 30 years. Put differently, both the increase in the monthly average probability of a worker entering unemployment and the decrease in the monthly average probability of an unemployed worker exiting unemployment have, as in a typical recession, contributed to the observed rise in unemployment (Elsby, Michaels, and Solon 2009). Since March 2009, unemployment inflow and outflow rates, measured as a share of the labor force, each have been over 3 percent. Because the outflow rate was notably higher than the inflow rate near the end of 2011, the unemployment rate has fallen.

The labor market is still recovering from the cyclical impacts of the recession. And it is still subject to the long-term slower trend in gross job gains and losses, as well as to the long-term decline in the share of the population that is employed. In the face of these trends, the Administration has pursued and continues to pursue robust policies to foster faster job creation in the short run, as well as an economic environment in which existing firms have reasons to increase employment, new firms are able to grow and innovate, and workers can find satisfying employment.

Earnings and Income Mobility over the Career and between Generations

Although the Nation's labor market is highly dynamic in terms of worker flows, the United States has had low rates of income mobility for decades, both across the career and across generations.

Low rates of income mobility across the career are especially notable for men, whose higher rates of labor force attachment make them much less likely than women to have years with zero earnings. Kopczuk, Saez, and Song (2010) show that the annual earnings of a man averaged across 11 years early in his working career are highly predictive of his annual earnings averaged across 11 years later in his working career. For example, a man in one of the bottom two quintiles of the income distribution early in his lifetime has less than a 10 percent chance of rising to the top quintile 20 years later.

Family (or individual) incomes in one generation are also highly correlated with family (or individual) incomes in the next generation. In other words, the children of parents who are poor are more likely than the children of well-off parents to be poor when they grow up. A common measure of mobility across generations is the intergenerational elasticity (IGE) of earnings or income, which is defined as the percentage difference in a child's income associated with a 1 percent difference in the parent's income.³ These IGE estimates are sensitive to several measurement issues, particularly fluctuations in incomes from year to year. Studies based on U.S. data that deal appropriately with these measurement issues suggest that plausible estimates of the average IGE between fathers and sons are between 0.4 and 0.6. An IGE of 0.4 means that if one father earned 20 percent more than another over their lifetime, the first father's son on average would earn 8 percent more than the second father's son; an IGE of 0.6 means that the first father's son would earn 12 percent more on average than the second father's son. That is, the higher the IGE is, the lower economic mobility is between the generations.

Data limitations make it difficult to infer whether the IGE or the correlation between parents' and children's income has changed significantly over time (Data Watch 6-2). Lee and Solon (2009) conclude that the IGE in the United States was fairly stable for cohorts born between 1952 and 1975, while Aaronson and Mazumder (2008) present evidence suggesting that it has increased in the past 30 years, implying that intergenerational mobility has fallen. None of the available research has suggested a decline in the IGE over time. Moreover, the widening of income inequality has meant that it is harder for someone born into the bottom to move to the middle or the top of the income distribution.

The high degree of persistence in incomes between generations in the United States is especially noteworthy in the context of cross-country comparisons. Corak (2011) makes such a comparison and finds that the average

³ IGEs most commonly have been estimated as the regression coefficient resulting from a linear regression of the logarithm of the income (or earnings) of a child on a measure of the logarithm of income (or earnings) of a parent or family.

Data Watch 6-2: Intergenerational Mobility

One measure of opportunity is the extent to which children grow up to live in better economic and social circumstances than their parents. While there has been useful research on this topic, data limitations have hampered attempts of economists and other social scientists to measure the extent of intergenerational mobility. Researchers interested in intergenerational mobility in the United States most commonly have used one of two nationally representative surveys to assess the relationships between the income and occupations of children and those of their parents—the Panel Study of Income Dynamics or the National Longitudinal Survey. Neither of these surveys was designed specifically to address questions concerning intergenerational mobility, however, and the lack of precision resulting from the relatively small numbers of people surveyed makes it difficult to discern trends in economic mobility.

Grusky and Cumberworth (2010) have suggested that, if organized into an administrative database with strict confidentiality protections, information gleaned from U.S. tax records could allow researchers to gain a much fuller picture of the evolution of earnings and career outcomes between generations. Mazumder (2005) has taken a step in this direction, using data from the Survey of Income and Program Participation linked to Social Security earnings records to study the relationship between parents' earnings and the later earnings of their adult sons. He finds that the intergenerational elasticity of earnings is around 0.6, which is larger than had been found in previous studies, probably because he had access to more accurate earnings histories.

estimated IGE of 0.47 for men in the United States, while lower than the IGE for countries such as the United Kingdom (0.50) and South Africa (0.69), is much higher than the IGE for men in countries such as Sweden (0.27), Norway (0.17), Finland (0.18), and Denmark (0.15). Jäntti et al. (2006) also compare IGEs for men's incomes in some of the same countries and report similar estimates.⁴

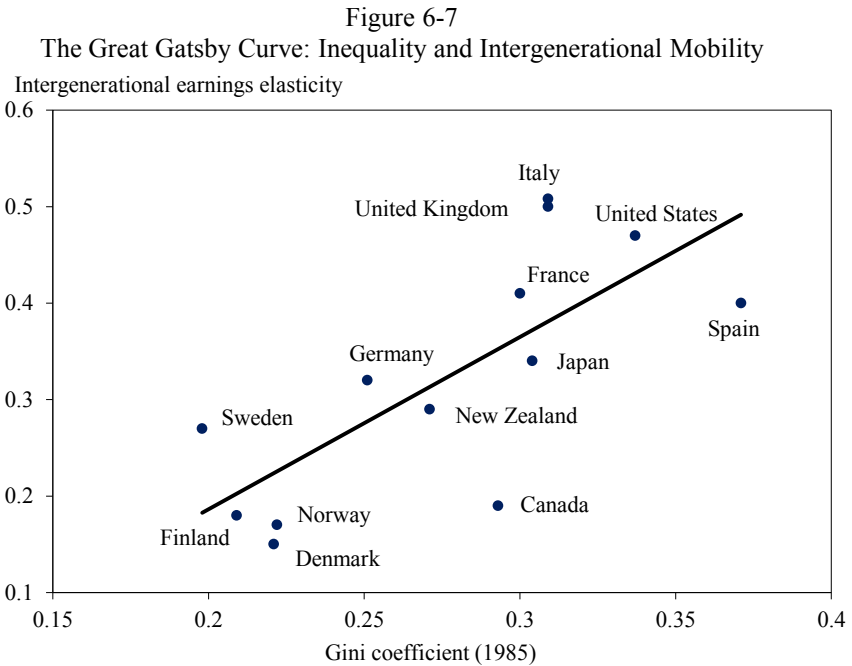
While many factors contribute to cross-country differences in intergenerational mobility, one clear pattern is that countries with more intergenerational mobility also tend to have lower point-in-time income inequality. Figure 6-7 plots the relationship across 13 industrialized countries between the IGE of the earnings of fathers and sons as reported in Corak (2011)

⁴ One exception is that Jäntti et al. report a somewhat lower IGE (0.31) for the United Kingdom, below that of the United States but still well above those in Nordic countries. Following the literature, this discussion focuses on IGEs for men, because in many countries the inconsistent labor force participation of women complicates the estimation of their IGEs.

and the Gini coefficient of after-tax 1985 income as reported in the OECD statistical database. The Gini coefficient, shown along the horizontal axis of the figure, is a common measure of income inequality; higher values mean higher levels of income inequality. Higher IGEs along the vertical axis mean less intergenerational mobility. The United States appears in the upper right part of Figure 6-7, indicating both high inequality and low intergenerational mobility.

As other research has shown, the finding of a positive relationship between IGE and inequality—a relationship that Krueger (2012) has referred to as “the Great Gatsby Curve”—is robust to alternative choices of countries, intergenerational mobility measures, and year in which income inequality is measured (see, for example, Corak 2011; Andrews and Leigh 2009; OECD 2010). This robust relationship suggests that at least some of the same mechanisms that drive income inequality also drive intergenerational mobility. For example, a rise in the rate of return to schooling can be expected to lead to both a rise in point-in-time income inequality and a decline in intergenerational mobility because educational attainment is positively correlated across generations.

The educational system also may contribute to the pattern in Figure 6-7. Research has found a strong negative correlation between spending on public education and IGEs across countries (Ichino, Karabarounis, and



Source: Corak (2011) and OECD.

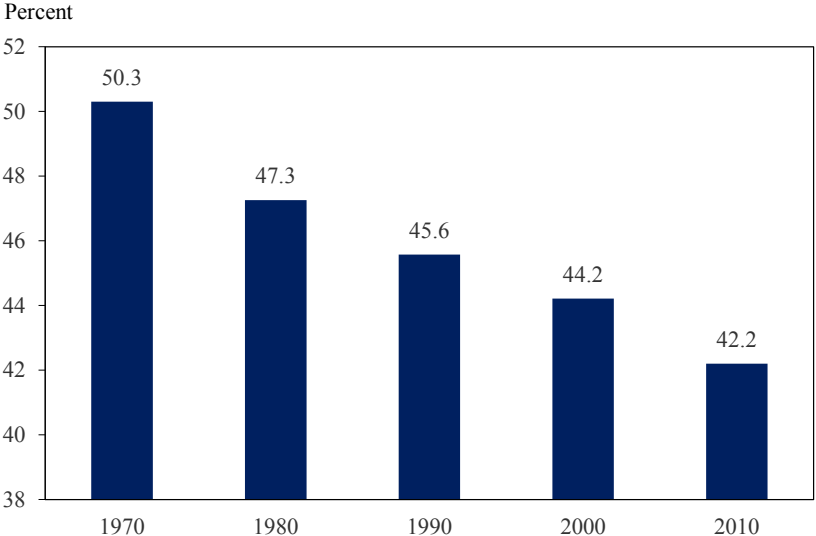
Moretti 2011). This pattern suggests that public investments in supporting children may help to reduce persistent inequality across generations. Similarly, the OECD has concluded that educational policies ranging from support for early childhood education to measures that support postsecondary education for students from low-income backgrounds can increase intergenerational income mobility (OECD 2010). As discussed later in this chapter, the Administration has taken multiple steps to improve the quality of education and to provide opportunities for all students to earn a postsecondary credential or degree.

Overall Trends in Income and Rising Inequality

Irrespective of the persistence in income across generations, the rungs on the ladder of the income distribution in the United States have moved farther apart, and income growth has been stagnant for the middle class for a decade.

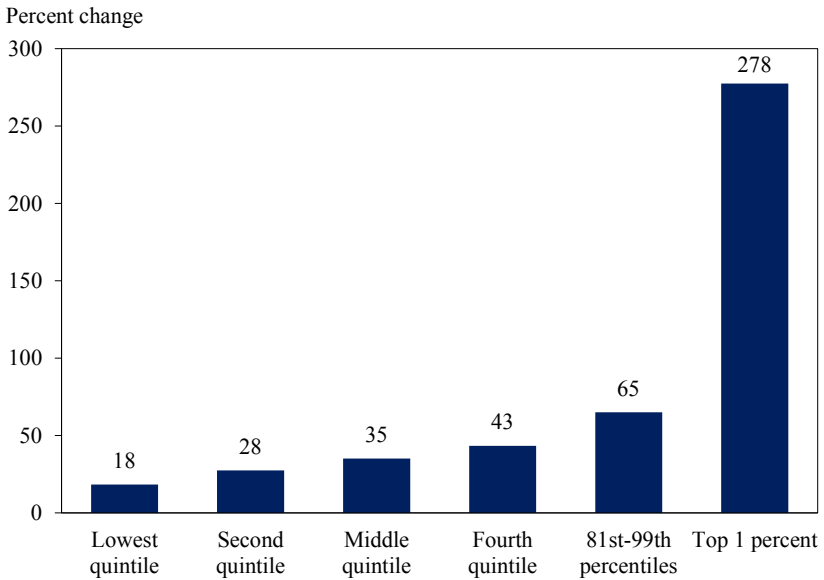
One indicator of the evolution of income over time is annual real median household income, which rose in the United States from the late 1960s through the late 1990s, was stagnant in the first part of the 2000s, and then, as is typical during recessions and their aftermath, fell between 2007 and 2010 (the last year for which data are available).

Figure 6-8
Percent of Households with Annual Income
within 50 Percent of the Median



Source: Department of Labor, Bureau of Labor Statistics; CEA calculations.

Figure 6-9
Growth in Real After-Tax Income, 1979–2007



Source: Congressional Budget Office.

Rising income inequality is another major development in the United States economy (see, for example, Autor, Katz, and Kearney 2008; Card and DiNardo 2002; CEA 1997). Growing dispersion of household incomes, a manifestation of growing dispersion of earnings, means that fewer and fewer households have incomes in the middle band of the income distribution. This can be seen clearly in Figure 6-8. In 1970, just over 50 percent of households had incomes within 50 percent of the median; that share fell to just over 44 percent in 2000 and to just over 42 percent in 2010.

Another way to look at changes in the distribution of income is to examine the rates of income growth for households at different income levels. A report released by the Congressional Budget Office (CBO) in October 2011 examines real growth in after-tax (and transfer) household income from 1979 through 2007 across quintiles and the top 1 percent of the income distribution. Figure 6-9, reproducing information from the CBO report, provides stark evidence of the rise in inequality, showing that real after-tax incomes grew by just 18 percent over nearly 30 years for those in the bottom income quintile and rose only somewhat more rapidly for those in the middle 60 percent of the distribution, but grew by a stunning 278 percent for those in the top 1 percent of the distribution.

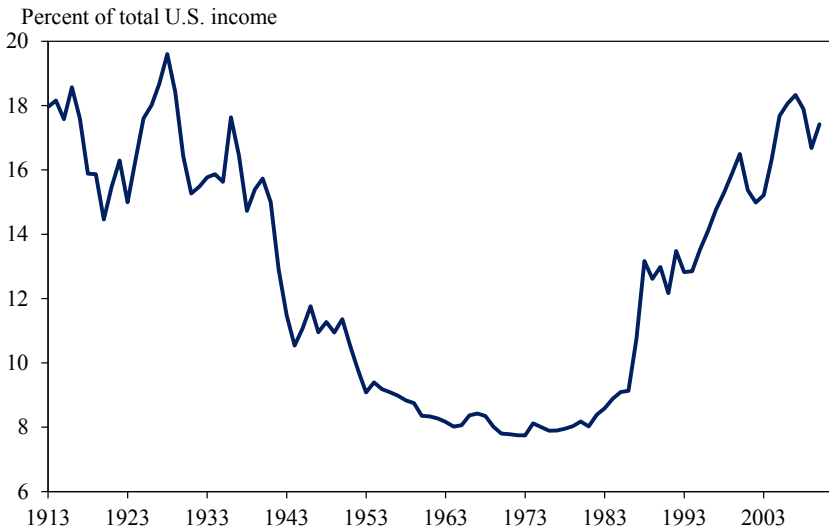
As a result of these divergent growth rates, increasingly more income has been concentrated at the top and less at the bottom of the income distribution. The CBO reports that the share of total after-tax household income

for the bottom four income quintiles was lower in 2007 than it was in 1979, and the share for those in the 81st to 99th percentiles was essentially flat. For the top 1 percent, however, the share more than doubled, from almost 8 percent in 1979 to 17 percent in 2007.

Piketty and Saez (2003, 2010), using data and definitions of income slightly different from the CBO report, focus on income inequality between those at various places in the very top of the distribution and the rest of the population. They find that the share of income prior to taxes and transfers excluding capital gains going to the earners in the 90–95th percentile of the distribution barely changed between 1979 and 2010 and that the share of income going to those in the 95–99th percentiles rose from almost 13 percent to about 16 percent. But the share of income going to the top 1 percent of earners rose from 8 percent in 1979 to 18 percent in 2007, the highest it had been since the Roaring Twenties, and it still stood at over 17 percent in 2010 (Figure 6-10).

Rising inequality has important implications in the context of low rates of intergenerational mobility. As incomes become more unequal, larger increases in household income are necessary for families to move from a lower part of the income distribution to a higher part—for example, from a level of household income that classifies a family as living in poverty to one that puts it in the middle of the distribution. Low rates of economic

Figure 6-10
Share of Total U.S. Income Earned by Top 1 Percent, 1913–2010



Note: Total income includes wages and salaries (including bonuses and stock-option exercises), pensions, profits, farm income, dividends, interest, and rental income.
Source: Piketty and Saez (2003, 2010); authors provided an estimate for 2010 based on partial returns.

mobility across generations imply that children born in poverty are more likely to remain in poverty as adults, while children born to higher-income parents are more likely to have higher incomes as adults. As long as income inequality is increasing, those adult children will find themselves even farther away from the middle class than their parents were. Perhaps even more worrisome, the Great Gatsby curve in Figure 6-7 suggests that a rise in inequality for the current generation of families could lead to a slowdown in economic mobility for the next generation.

The confluence of rising inequality and low economic mobility over the past three decades poses a real threat to the future of the United States as a land of opportunity. Social and economic mobility across generations are at risk of declining unless concerted efforts are devoted to providing more opportunities for those born into lower-income households.

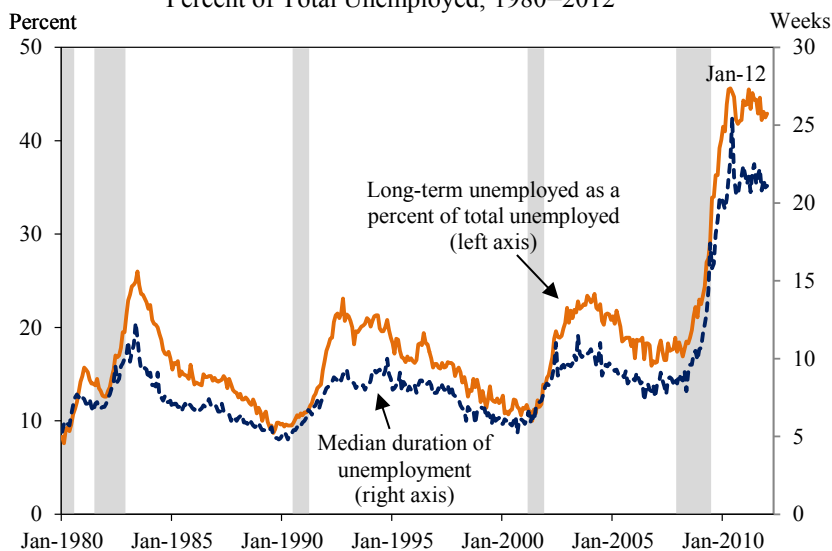
Long-Term Unemployment

The upheaval in the labor market brought on by the recession that started in late 2007 is primarily a cyclical phenomenon. A major challenge, especially given the long-term changes in the labor market that were underway even before the recession, is how to prevent these cyclical dislocations from having permanent effects on workers' prospects. This means that pathways for the long-term unemployed to return to the workforce are a particular priority. The protracted high level of unemployment has led to large numbers of long-term unemployed workers—those who have been out of work for more than 26 weeks. Currently, 5.5 million workers—more than two-fifths of all unemployed individuals—have been jobless for more than 26 weeks, and over 1.8 million have been without a job for more than two years.

Historically, as depicted in Figure 6-11, the share of the unemployed that has been unemployed for more than 26 weeks has been quite cyclical, starting at a relatively low point right before a recession, growing thereafter, and usually peaking many months into the recovery before gradually declining. Another useful measure of unemployment duration is the median duration—the amount of time that the person in the middle of the distribution has spent unemployed to date. Typically, this measure has been similarly cyclical, and as a result of the 2007–09 recession it remains elevated at 21.1 weeks.

A long period of joblessness is obviously first and foremost a serious hardship for the individuals involved. The loss of income due to unemployment can wreak havoc on households' finances, often necessitating liquidation of savings. Households with unemployed members are more likely to fall behind on their bills and to suffer foreclosure or bankruptcy; foreclosures

Figure 6-11
 Median Duration of Unemployment and Long-Term Unemployed as a
 Percent of Total Unemployed, 1980–2012



Note: Shading denotes recession.

Source: Department of Labor, Bureau of Labor Statistics.

also can have adverse effects on the prices of neighboring homes. To help the long-term unemployed keep their homes, the Administration created a version of the Home Affordable Modification Program (HAMP) for the unemployed, called HAMP UP, in which unemployed homeowners were given a three month forbearance period on their mortgage payments. In July 2011, this forbearance period was extended to 12 months.

Income losses associated with job loss can persist even after reemployment. Recent research examined male workers age 50 or younger with at least three years of tenure who lost their jobs in mass layoffs (defined as employment decreases of at least 30 percent over two years at their place of employment) between 1980 and 2005. The researchers concluded that job displacement led to a loss of 1.7 years of earnings, on average, accumulated over 20 years. Moreover, job displacement led to an average accumulated earnings loss of 2.8 years if the job was lost when the unemployment rate was above 8 percent, but the earnings loss was only half as large—1.4 years—if the job was lost when the unemployment rate was below 6 percent (Davis and von Wachter 2011).

In addition to the mortgage forbearance program mentioned above, the Administration has supported the long-term unemployed by calling for extended unemployment compensation, which provides much-needed income to these workers and their families while the recipient searches for work. As explained in Chapter 7, continued extensions of the Emergency

Unemployment Compensation and Extended Benefits programs through 2012 are vital to those who remain unemployed. Additionally, the American Jobs Act proposal for extending unemployment benefits also included significant reforms to the unemployment insurance system designed to speed the return of benefit recipients to work.

As part of his Fiscal Year 2013 Budget, the President is proposing a \$12.5 billion Pathways Back to Work Fund to provide employment opportunities for vulnerable youth, low-income adults, and the long-term unemployed, and an expanded community college initiative to support state and community college partnerships with business to give workers the skills employers need. The President also is proposing to streamline training and employment services for dislocated workers, improving access to critical supports for getting the unemployed back into employment.

PREPARING FOR TOMORROW'S LABOR MARKET

Even as the Administration remains focused on strengthening and sustaining the recovery from the recession, the President continues to address the longer-term challenges in the structure of the American economy and labor market. To ensure that American workers are prepared to meet the evolving needs of employers, the Nation's education and training system must provide the workers of tomorrow with the skills they will need for the jobs of tomorrow. At the same time, jobs and workplaces also must evolve to enable workers to fulfill family and other nonwork responsibilities (Box 6-1). This section describes what the jobs of tomorrow are likely to look like, why educating workers is a cornerstone of economic opportunity and growth, and how the Administration's policies are working to prepare Americans for the jobs of tomorrow.

Education and the Workers of Tomorrow

The rise in wage and income inequality over recent decades is largely attributable to long-lasting structural changes in the U.S. economy. Among the changes are technological advances that have increased employer demand for a relatively more highly educated workforce, a slowdown in the expansion of educational attainment, and increased competition from overseas for many lower-paid jobs. Another is a decline in the share of the workforce covered by collective bargaining agreements and the decline in the real value of the minimum wage, both of which historically helped protect the wages of lower-paid workers.⁵

⁵ Extensive reviews of existing research can be found in Acemoglu and Autor (2011) and Autor and Katz (1999).

Box 6-1: Work-Life Balance in the Jobs of Tomorrow

American household life has changed dramatically over the past half century in ways that have caused many workers to face conflicts between their work and personal lives. Women are now the majority recipients of bachelor's and advanced degrees and compose nearly 50 percent of the workforce. Families rely increasingly on women's earnings to make ends meet. In addition to managing care of children, both men and women juggle elder caregiving responsibilities with work. In 2008, approximately 43.5 million Americans served as unpaid caregivers to a family member over the age of 50. Workplace flexibility is also important for older Americans themselves. In 2011, the first of the baby boomers turned age 65. Workplace flexibility policies, such as part-time work or job sharing, facilitate a phased retirement that helps older workers transition slowly out of the workforce, allowing them to take care of their health needs and maintain their economic security while moving toward retirement.

Workplace flexibility can be expanded by increasing workers' control over when, where, and how much they work. These goals can be achieved through a variety of different arrangements that allow workers to continue making productive contributions to the workforce while also attending to family and other responsibilities. Arrangements range from job sharing, to phased retirement of older workers, to telecommuting. Workplace flexibility policies not only help employees balance work and family responsibilities but also can improve employers' bottom lines.

As in all business decisions, the critical considerations for employers in adoption of flexible workplace policies are the benefits and costs. Almost one-third of firms cite costs or limited funds as obstacles to implementing workplace flexibility arrangements. On the benefit side, however, as documented in CEA (2010), these practices can reduce turnover and improve recruitment, increasing the productivity of an employer's workforce. Moreover, flexible workplace practices are associated with improved employee health and decreased absenteeism, a major cost for employers. The CEA study estimated that wholesale adoption of flexible workplace policies could save as much as \$15 billion a year through greater productivity, lower turnover, and reduced absenteeism. Should more firms adopt such practices, the benefits to society, in the form of reduced traffic, improved employment outcomes, and more efficient allocation of workers to employers, could be even greater than the gains to individual firms and workers (Galinsky et al. 2011).

Although the academic literature has identified numerous benefits from flexible workplace practices, along a variety of dimensions, the

adoption rates for these practices differ across industries and employers of different sizes. Goldin and Katz (2011) explored the prevalence of flexible workplace arrangements across industries and found that, although these practices are gaining in popularity, some industries lag behind, in particular the business and financial sectors. Overall, the CEA study reported that more than half of employers report allowing some workers to periodically change their starting and quitting times. However, only 28 percent of full-time workers and 39 percent of part-time workers report actually having flexible work hours. Even if some employers offer more flexible workplace arrangements, there remains the concern that their employees may not be taking advantage of those arrangements because either, in the case of unpaid leave, they cannot afford to bring home a smaller paycheck, or, in the case of paid leave, they are afraid to take leave for fear of missing out on advancements or not being viewed as a “team player.”

A lack of data has hindered deeper understanding of the benefits and costs of flexibility, as well as knowledge about who is taking advantage of that flexibility. The largest, most detailed source of data, a survey of employers, provides information on practices that is now three years old and does not contain information for the smallest firms. The only nationally representative data from workers are seven years old and provide little information on the prevalence of flexible practices. While the existing evidence has demonstrated a strong connection between flexibility and productivity, additional research exploring the mechanism through which flexibility influences worker’s job satisfaction and firms’ profits would better inform policymakers and managers alike. In the summer of 2012, the results of a module added to the American Time Use Survey will provide expanded information about workplace flexibility from the workers’ perspective. The module asks survey respondents about their access to leave and flexible scheduling, how they use such policies to balance their work and personal responsibilities, and whether they fail to take advantage of existing policies because of a fear of negative consequences. These data will add to the existing knowledge base on workplace flexibility. Although the literature is small, the best available evidence suggests that adoption of more flexible practices can boost productivity, improve morale, and benefit the U.S. economy—all while strengthening families.

Because these structural changes have shifted demand toward a workforce with relatively more education, a substantial fraction of the overall increase in wage and income inequality is related to a growing divergence in earnings between those with more years of education and those with fewer years of education, as depicted in Figure 6-12.

For example, in 2010, workers with a bachelor's degree or higher earned nearly twice as much as those with a high school degree, a premium that has risen since 1980, when college graduates earned 45 percent more than high school graduates. In fact, even long before the most recent recession, the average real annual earnings of those with a high school degree or less fell below the levels of the 1970s.

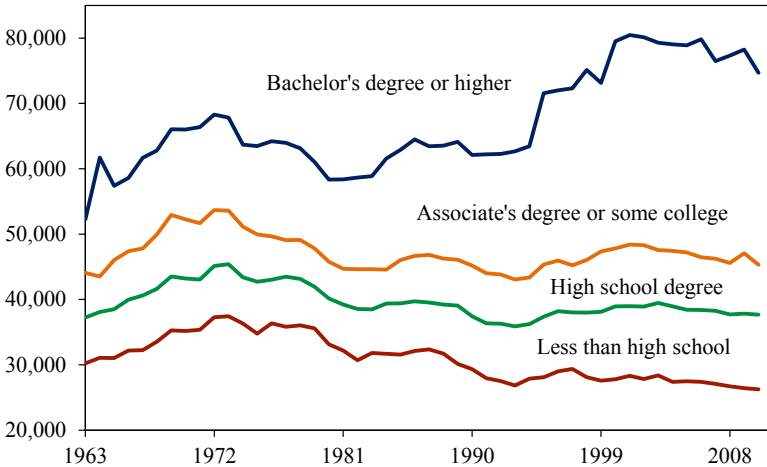
One important way to help stem the tide of rising inequality, and potentially to ameliorate the effects of low intergenerational economic mobility, is to increase the number of workers who obtain postsecondary education and earn higher wages as a result. For this reason, President Obama has set the ambitious goal of returning the United States, by 2020, to the world's top spot in the share of 25- to 34-year-olds with a college degree.

Increasing the number of workers who obtain postsecondary education is also vital for meeting the changing skill needs of firms. The BLS Employment Projections Program produces forecasts of employment by industry, occupation, and education on an approximately biennial basis. The industry employment forecasts are based on incorporating projections of the size of the labor force into a model of output growth across U.S. industries. These detailed industry employment forecasts are then mapped into projections of employment growth by occupation, and then into forecasts of growth in employment by education group. Beginning with the newly released projections for 2010–20, the BLS is projecting employment growth by education group by assigning to each occupation the typical level of formal education needed to enter the occupation, and then aggregating by education group the projected employment growth in the occupations requiring that level of education. As shown in Figure 6-13, the BLS projects that in the coming years, jobs requiring education beyond a high school degree will grow by more than the average, while occupations requiring at most a high school diploma will grow by less than the average. For example, between 2010 and 2020, employment in jobs that require an associate's degree is projected to grow by 18.0 percent, 3.7 percentage points more than the average projected employment growth of 14.3 percent. Much of the divergence in employment growth across education groups is driven by the projected growth of sectors such as health care and education that intensively utilize workers in occupations that typically require education beyond a high school diploma.

Figure 6-12

Average Annual Earnings by Worker Education Level, 1963–2010

Dollars (2010)

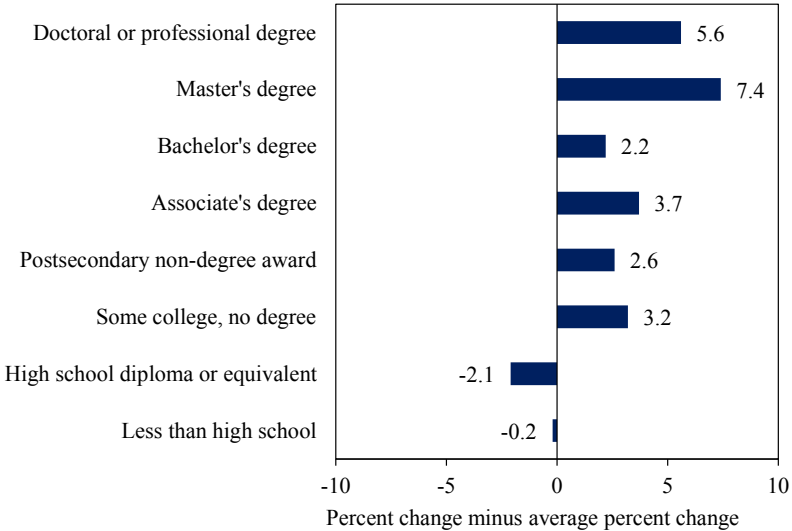


Note: The sample includes workers aged 25–65 who worked at least 35 hours a week and for at least 50 weeks in the calendar year. Before 1992, education groups are defined based on the highest grade of school or year of college completed. Beginning in 1992, groups are defined based on the highest degree or diploma earned. Earnings are deflated using the CPI-U. Calculations are based on survey data collected in March of each year and reflect average wage and salary income for the previous calendar year.

Source: CEA calculations using March Current Population Survey

Information that tracks the changing skill needs of firms can help Americans make informed career decisions. In addition to the statistics published by the BLS on existing and projected jobs by industry, occupation, and education, the potential exists to harness new data sources to gain a deeper understanding of what skills are in high demand. For example, the more than 50 million U.S.-based members of LinkedIn, an online professional networking company, typically provide to LinkedIn their job titles and the companies they work for, and upon joining, many members also provide information on their past work history. LinkedIn classifies members' jobs by industry and occupation, often at a more detailed level than is available in government statistics. The resulting information can be used to track changes over time in the industries and occupations in which LinkedIn's members work and to identify emerging sectors and job titles. LinkedIn's members are not a nationally representative sample of the U.S. workforce, but because they tend to work in sectors of the economy that require higher levels of education, the information embodied in the changing distribution of the industries and occupations in which members are employed has the potential to inform the decisions of individuals considering specific educational and career paths.

Figure 6-13
 Difference Between Projected Employment Growth Rate by Education
 and Average Projected Employment Growth Rate, 2010-2020



Source: Department of Labor, Bureau of Labor Statistics.

LinkedIn has produced initial tabulations from among its U.S. members of the growth rate of employment in industries and occupations since 2007. These tabulations are for a longitudinal sample of individuals, based on aggregated historical data from their resumes and other information that they provide, LinkedIn reports that two of the fastest-growing industries among their members between 2007 and 2011 were the Internet and oil and energy; two of the fastest-shrinking industries were newspapers and construction. Among the fastest-growing occupations were social media (including jobs titles such as social media manager, social media marketing manager, and social media specialist) and digital technology (including digital producer, digital product manager, digital strategist, and digital sales manager); LinkedIn reports that teachers and middle-management positions were among the shrinking occupations.

One of the main drivers of the increasing relative demand for workers with more education and training is the continuing shift toward using machines or computers to perform the routine tasks once done by workers. Although the BLS, assuming a continuation of these trends, projects that the number of manufacturing jobs will decline between 2010 and 2020, the U.S. manufacturing sector has added more than 400,000 net new jobs since the beginning of 2010, the first sustained job growth in manufacturing since the late 1990s.

Some of the recent growth in manufacturing jobs is the direct result of firms that are choosing to produce goods in the United States rather than using overseas labor. The Administration is supporting this “insourcing” with new tax proposals that eliminate tax advantages for moving jobs overseas and reward companies that choose to invest in or bring jobs back to the United States. In addition, the President has proposed measures to revitalize the manufacturing sector. These measures include initiatives to help develop and produce advanced technologies, ensuring clean energy technologies that will fuel the 21st century economy are built in the United States; funding to help catalyze partnerships between universities and industries to develop new technologies for manufacturing products and processes; the creation of a new Interagency Trade Enforcement Center to challenge unfair trading practices; and tax incentives to promote job growth in communities hard-hit by factory closings.

Increasing Educational Attainment

To prepare for the jobs of tomorrow, it is essential to invest in the American workforce and to increase the number of young people who attain a college degree. Meeting the President’s college completion goal for 25- to 34-year-olds requires investments in early, primary, and secondary education to increase the number of students who are college-ready when they graduate from high school. Meeting the goal also requires policies and programs that make college more affordable and accessible.

Teachers in the Nation’s public schools are crucial to preparing children for the jobs of tomorrow. During the depths of the recession, however, many State and local governments were forced to make cuts, resulting in the loss of more than 200,000 education jobs over the past three years. Had it not been for the combined \$40 billion in targeted assistance through the Recovery Act’s State Fiscal Stabilization Fund and the Education Jobs Fund, the cuts would have been worse: these programs provided the resources to support 420,000 teacher job-years. Given the continued need to prevent teacher layoffs and to rehire many of the teachers who lost their jobs during the recession, the President’s FY 2013 Budget proposes a \$25 billion teacher stabilization fund.

The Administration also has made improving the quality of education a priority and has taken an innovative approach, using grant competitions and evaluations to fund promising practices and learn more about what works, from early childhood education through high school. A key part of this effort has been Race to the Top grants, established as part of the Recovery Act. Competitive grants have been awarded to states to undertake innovative reform in four areas of K–12 education: implementing rigorous

standards and assessments; using data to improve instruction and decisionmaking; recruiting and retaining effective teachers and principals; and turning around the lowest-performing schools. Race to the Top grants have catalyzed widespread reform even in states that did not win an award.

In 2011, Race to the Top funds were also used for Early Learning Challenge grants to promote evidence-based evaluation of programs, develop strategies for families and parents to assess the quality of early learning programs, and create age-appropriate curricula and assessment systems. The Early Learning Challenge fund announced nine state grant winners in December 2011. As with the K–12 Race to the Top competition, although not all proposals were funded, the framework of providing competitive grants to states to formulate their own solutions focused local conversations on education reform. The Early Learning Challenge grants complement the Administration’s major investments in improving a cornerstone of early childhood education, the Head Start and Early Head Start programs, by increasing funding by \$2.1 billion in two years through the Recovery Act, by nearly doubling the number of children and families served by Early Head Start, and by taking key steps to increase Head Start Center program quality and accountability. Notably, the Department of Health and Human Services has begun implementing new regulations that, for the first time, require current grantees that do not meet quality benchmarks to compete for continued funding.

In addition to Race to the Top, the Administration has funded other important innovations in education. The Investing in Innovation Fund supports projects in K–12 education that test, validate, and scale up promising strategies and interventions that raise overall student achievement, close the achievement gap, and improve outcomes for high-need students. The Promise Neighborhoods initiative supports cradle-to-career wraparound services to improve educational outcomes for students in distressed high-poverty neighborhoods. The President’s 2012 State of the Union Address challenged all states to do what 21 states have already done: require all students to graduate from high school or stay in school until age 18. Raising the compulsory schooling age increases average educational attainment and, for those induced to stay in school longer, leads to higher earnings when those students become adults. In view of the positive externalities from schooling, economists Milton and Rose Friedman wrote, “What kind of governmental action is justified...? The most obvious is to require that each child receive a minimum amount of schooling of a specified kind” (Friedman and Friedman 1962).

The President has committed to continued investments in America’s education system. Beyond making investments to help all students prepare

for college, the Administration is working to make college affordable for American families. In recent years, published college tuitions have risen sharply, posing a threat to the Nation's growing need for workers with college-level skills. The Administration has made college accessibility and affordability a top priority. Through the Recovery Act and the Health Care and Education Reconciliation Act passed in 2010, the Administration raised the maximum Pell Grant award from \$4,731 in 2008 to \$5,550 in 2010, and the FY 2013 Budget calls for the maximum to increase to \$5,635 for the 2013–14 school year. Some 8.1 million college students received an average of \$3,700 in Pell Grants in 2009–10. These figures are up sharply from the year before President Obama took office, when 5.5 million college students received an average of \$2,650 apiece in Pell aid, and the President remains committed to protecting these historic increases in Pell Grant awards.

In addition, the American Opportunity Tax Credit (AOTC), established through the Recovery Act, provides up to \$2,500 a year for college tuition and related expenses for American families. Compared with the Hope Scholarship that it largely replaces, the AOTC offers a higher maximum benefit; can be claimed for up to four, rather than only two, years of undergraduate education; has a higher income eligibility cutoff, making the credit available to more middle-class families; and is partially refundable, thereby also reaching lower-income families. This credit is estimated to have benefited 9.4 million students and their families in 2011. In December 2010, the President signed an extension of the AOTC through the end of 2012, and his FY 2013 Budget request proposes to make the AOTC permanent.

Data from the College Board (2011) demonstrate the effectiveness of these Administration initiatives to keep college affordable (see also CEA 2011). The estimated average net price for full-time students attending public four-year institutions increased by only about \$60 between 2007–08 and 2011–12, and the estimated average net price for full-time students attending public two-year and private nonprofit four-year institutions actually fell.

To build on the successes of Pell expansions and the AOTC as well as lessons from K–12 education reform, the President has proposed a Race to the Top for College Completion and Affordability to make public colleges more affordable and a better value and to drive reforms that will help more students complete their degrees on time. The FY 2013 Budget also proposes reforms to the distribution of campus based-aid to reward colleges that are serving low-income students, setting tuitions responsibly, and offering a quality education that prepares students to obtain employment and repay their loans. Finally, the Budget proposes a new First in the World Fund that introduces an evidence-based framework, modeled after the Investing in Innovation initiative, to develop, validate, and scale up effective approaches

in higher education. (For a discussion of financing the cost of college, see Economics Applications Box 6-1.)

Federally Supported Job Training

The education of workers does not end when they complete formal schooling and enter the labor market. As the economy evolves, workers often need to develop new skills to meet the changing demands of firms. In many cases, firms partner with their workers to help them acquire new skills, but for workers who have lost their jobs or are seeking to change fields or careers, this option may not be available. Providing such workers with opportunities for training is especially important in today's economy given the continued high rates of unemployment that are the direct result of the recession, and it will remain important in ensuring a skilled workforce well into the future.

The Federal Government funds two main training programs for adults—the Trade Adjustment Assistance (TAA) program and the Workforce Investment Act (WIA) formula grant program. The WIA Adult and Dislocated Programs have by far the largest reach, serving 8.6 million participants in 2010 (the most recent year for which data are available) at a total annual cost of \$3.8 billion.⁶ Created in 1998, the WIA system provides reemployment and training services to adults who are economically disadvantaged and to workers who have been displaced from their jobs. Importantly, WIA moved the design and management of job training programs to the local level by creating “one-stop” employment centers where job seekers can access all employment services of the Department of Labor. WIA provides both short-term services, including job search assistance and basic skills assessments, and longer-term services that involve more substantial career counseling as well as training services. Program participants work with a case worker to choose the menu of services that best meets their needs, although limited funds mean not all participants have access to all services deemed appropriate. Research suggests that the average WIA participant benefits from the program, although the quality of the services provided is somewhat uneven. One recent study found that, on average, WIA training programs for adults boosted employment and earnings, although there was substantial variation across states and across participants depending on which WIA program they were in and what kind of services they received (Heinrich, Mueser, and Troske 2008). Growing evidence from studies of state programs, particularly studies that track participants for a longer

⁶ Other smaller programs serving many fewer participants include the Employment Services Program and the Adult Basic Education Program. In addition, WIA also has a small program that serves economically disadvantaged youth.

Economics Application Box 6-1: Calculating the Cost of College

The decision to attend college is one of life's most important decisions. Individuals with a college degree earn substantially more throughout their working lives than otherwise similar non-degree holders, on average, but the dollar costs of college can be high and many students accumulate substantial debt. In addition, there is an "opportunity cost" of college—students are unable to work for pay while performing school-related tasks.

One key piece of information that a prospective student should have is the actual dollar price of college that the student is likely to pay. The published costs of a year of college do not tell the full story. Many students receive Federal assistance, and individual colleges and universities often have their own need-based aid programs, as well as merit scholarships.

The Department of Education has two particularly useful tools for prospective college students who would like to understand better what they are likely to pay in tuition, room and board, expenses, and fees. While the exact financial aid available to any particular student depends on a number of factors including household size, household income, and asset net worth, the Department of Education's FAFSA4caster (<http://fafsa4caster.ed.gov/>) can help students learn how much aid might be available. Using the College Navigator tool (<https://nces.ed.gov/college-navigator/>), a prospective college student can learn how Federal, state and local, and institutional aid affect net prices at specific colleges.

A menu-driven format allows a prospective student to select a college or set of colleges (say, by geography or type of degree) and discover the average net price paid by students of various income levels at each college on the prospective student's list. The average net prices across schools can vary widely and can deviate substantially from the published costs. For example, information from the College Calculator shows that, for households with income between \$48,000 and \$75,000, the average annual cost of attending one of the top ten national universities (as ranked by *U.S. News and World Report*) in 2009–10 was \$52,796. The average net price for those who received aid at one of those institutions, however, was a substantially lower \$9,340. Meanwhile, large state schools with much lower published costs than the private universities can have higher net costs. For households in the \$48,000–\$75,000 income range that received aid, the average annual net cost (including the costs of living on campus) in 2009–10 at the top ten largest public universities was \$13,486.

period of time, shows that training for adults can have large positive effects on earnings. Combining classroom learning with more hands-on training usually has led to the largest and most lasting impacts (Hotz, Imbens, and Klerman 2006; Dyke et al. 2006).

The Trade Adjustment Assistance program was established in 1963 and has undergone numerous changes since its inception, but its basic purpose remains to provide training to workers displaced as the result of foreign competition. Eligible workers receive the same kinds of reemployment and training services offered to WIA participants, but more generous funding allows them to receive training for a longer period of time. Moreover, TAA provides income supplements to regular unemployment insurance benefits as well as an allowance for relocation. If the displaced worker is over 50 years old and finds a new job paying less than \$50,000 a year, TAA also provides the worker the option to receive wage insurance in the amount of half the difference between his or her old and new wage (up to a cap of \$10,000) for up to two years.

Recognizing the importance of job training to American workers and their families, the President has proposed a major initiative to provide workers with the tools and skills they need to find new jobs—by forging new partnerships between community colleges and businesses to train 2 million skilled workers and by streamlining access to training and employment services for dislocated workers.

The current system does not treat all workers who were dislocated because of economic shifts equally. As noted above, workers in trade-impacted industries are eligible for extensive income support, training, and reemployment services under the TAA, while those who lose their jobs for other reasons receive less generous assistance. In this increasingly global economy, it is difficult to distinguish between trade, technology, outsourcing, consumer trends, and other economic shifts that cause displacement. The President believes that dislocated workers should be able to access a single program, visit a single location or go to a single web site to find information about and assistance with job and training opportunities in their community. Ensuring that displaced workers have the information and training they need to successfully return to work is important not only for those who have lost their jobs as a result of the 2007–09 recession, but also for those who will be in need of these services in the future.

CONCLUSION

The 2007–09 recession severely disrupted a labor market that was already under stress from decades of rising inequality, stagnant middle-class incomes, and weak job growth in the 2001–07 recovery period. The job market has been recovering gradually since the end of the recession, and the Administration continues to make strengthening and sustaining the recovery in the job market a top priority. The policies proposed by the Administration will promote continued economic growth and job creation by supporting aggregate demand through an extension of the 2 percentage point payroll tax cut, the continuation of extended unemployment insurance benefits, investments in infrastructure, and assistance to states and localities to retain school teachers and first responders. Investments in expanded reemployment services and training for low-skilled and displaced workers will help get Americans back to work. And the President’s proposals to invest in elementary and secondary education and to make college more affordable will lay the foundation for a stronger economy in the future.

