

# **NAVIGATING THE U.S. LABOR MARKET: TRENDS AND PROSPECTS FOR WORKERS**

**Niki Dickerson**

**Rutgers University**

This report has been funded, either wholly or in part, with Federal funds from the U.S. Department of Labor, Employment and Training Administration under Contract Number K-6826-8-00-80-30. The contents of this publication do not necessarily reflect the views or policies of the Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement of same by the U.S. Government.

## **NAVIGATING THE U.S. LABOR MARKET: TRENDS AND PROSPECTS FOR WORKERS**

**S**weeping, full-scale transformations of the American and global economy have radically changed work. As has been amply documented, the advent of the global economy and the diffusion of information and communication technologies into most aspects of social and economic life have been the most catalytic of these changes. As a result, the pathways workers must navigate to keep pace in a rapidly shifting labor market are also enduring radical change.

This report outlines the organization of the labor market, describes underlying patterns of earnings and employment, and, in the final section, describes implications for future research. By understanding the context in which workers operate, government managers, policymakers, and practitioners will be better prepared to design effective programs to increase worker employability and skills. This report reviews three salient trends in the labor market:

### **A. Profile of Work and Workers**

This section offers a profile of the labor market and the labor force that includes projections about occupational and labor force trends, a discussion of the changing nature and character of work, and analysis of contingent work arrangements, underemployment, the working poor, work hours, and eroding wages.

### **B. The New Occupational Hierarchy and Changing Skill Requirements**

Technological change and global competition have increased the earnings gap between educated/skilled and unskilled workers. The number of low-skilled jobs has decreased precipitously and technology has caused the demand for more skilled workers to skyrocket across a wide spectrum of occupational categories. This section describes those changes, their implications for workers, and projected trends.

### **C. Work, Workers and Inequality**

This report focuses on general trends and conditions for the average worker. The income inequality found among American work and workers is an enduring feature of the American economy, widening substantially over the past 20 years. This section outlines various dimensions of inequality, their effect on different sectors of the labor force, and changing trends. Topics include pay inequality, occupational segregation, industrial sectoralization, residential segregation and regional variations in economic trends.

### **D. Implications for Future Research**

In light of the trends reviewed in this report, this section offers several suggestions for new research.

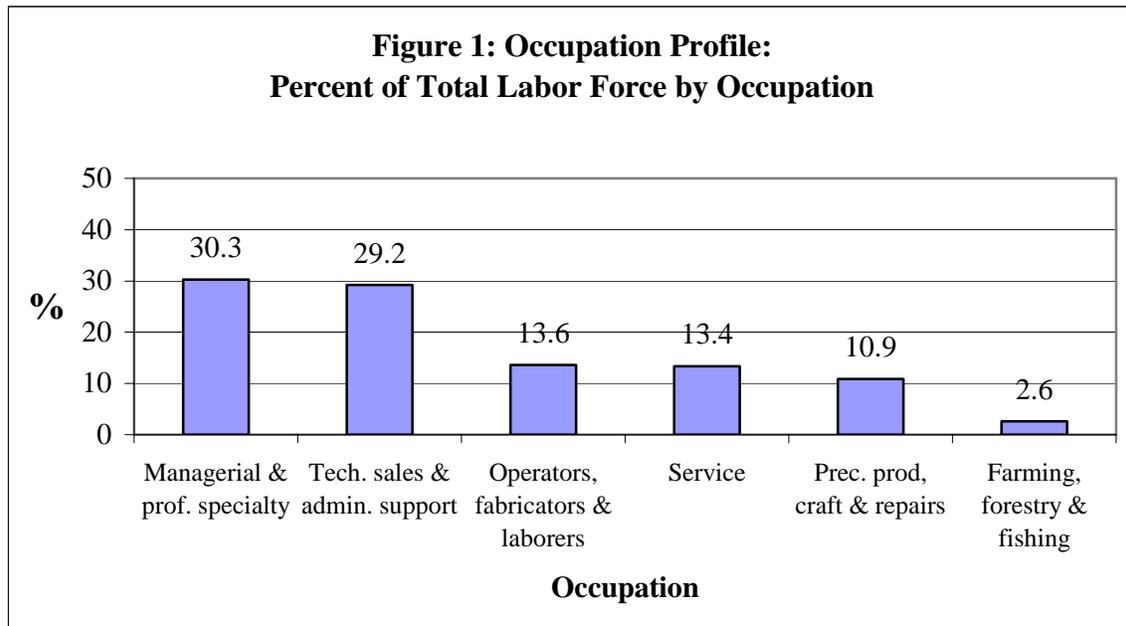
## Caveat

An important caveat about the discussions in this report: given inordinate disparities among workers and occupations in terms of working conditions, compensation, flexibility, and other indices, it is nearly impossible to talk generally about the state of affairs for workers. Social scientists do so, as a matter of convenience, to offer ‘snapshots’ of the labor market, but these generalizations should always be tempered with a reminder that the conditions for workers vary widely. Some of the economic and labor market trends discussed here affect only certain sectors of the labor force, although many affect nearly all workers, albeit often in varying ways. These differences will be noted throughout the discussion.

## A. PROFILE OF WORK AND WORKERS

### Work

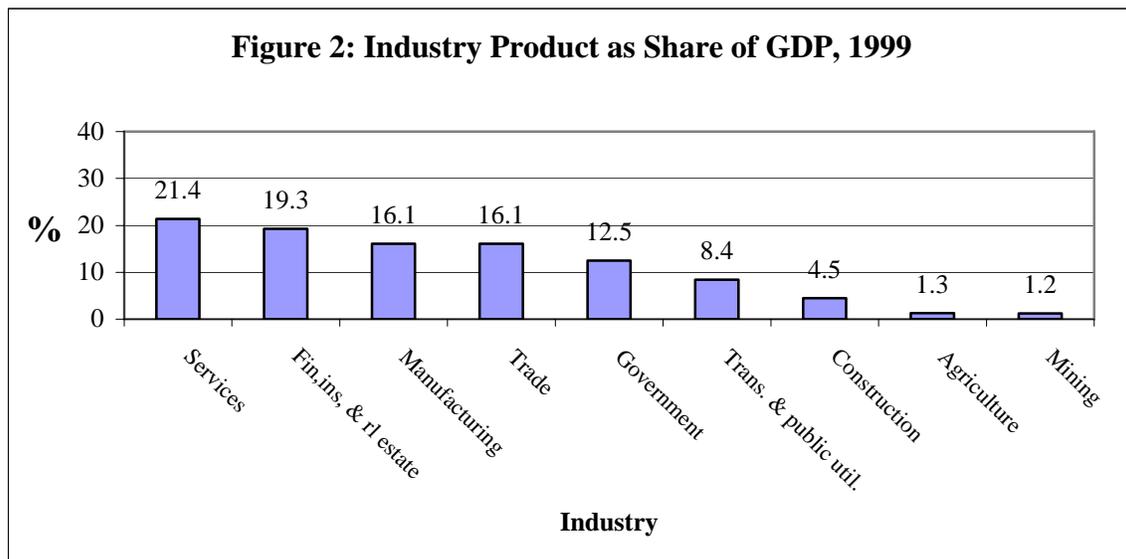
As the economy changes, occupations and industries grow and contract, and along with them, opportunities and barriers for workers shift. Occupations are grouped by the Census into six broad occupational categories, 1) managerial and professional specialty, 2) technical sales and administrative support, 3) service occupations, 4) precision production, craft and repair, 5) operators, fabricators and laborers, and 6) farming, forestry and fishing. The distribution of workers across these categories can be seen in Figure 1.



Source: US Census Bureau Statistical Abstract of the United States, Section 13, Table No. 669 & 677

The white-collar occupations, largely represented by two of these six categories—managerial/professional and technical/administrative—employ more than half of the nation’s workers, nearly 60%. (Almost one-third of the labor force is employed as professionals and the remaining two-thirds as technical, service, administrative support workers or laborers.) The Census designations are quite broad, and workers within these broad categories have very wide variations in skills and income levels. For example, a corporate executive and an elementary school teacher are both included in the managerial and professional specialty category, although they have very different status and are compensated differently.

As seen in Figure 2, two of the nation’s nine industrial sectors, finance and services, account for 40% of the GDP. These figures indicate the dominance of these industries in the U.S. economy. These core industries drive changes in the economy and, thus, drive opportunities for workers.



Source: Bureau of Economic Analysis, Industry Accounts Data, [www.bea.doc.gov/bea/dn2/gposhr](http://www.bea.doc.gov/bea/dn2/gposhr)

The following major shifts in occupational growth are projected by the Bureau of Labor Statistics (BLS) to take place over the next six years, and are particularly determinative of opportunities for workers:

- Over the 1998-2008 period, total employment is projected to increase by 14%;
- Service-producing industries will account for virtually all of the job growth;
- Health services, business services, social services, and engineering, management, and related services are expected to account for almost one of every two non-farm wage and salary jobs added to the economy during the 1998-2008 period.

Manufacturing's share of total jobs is expected to decline, as a decrease of 89,000 manufacturing jobs is projected;

- Professional specialty occupations are projected to add the most jobs—5.3 million. Service workers are expected to add 3.9 million jobs. These two groups are expected to provide 45% of total projected job growth over the 1998-2008 period;
- The five fastest-growing occupations are within computer-related occupations, commonly referred to as information technology occupations.

## **The Economy**

The decade-long growth of the U.S. economy ground to a halt during the year 2000; the economic crisis brought on by the events of September 11<sup>th</sup> dealt powerful shocks to industries including airlines and tourism. The most immediate and worrisome consequence for workers is a tight labor market created by the loss of hundreds of thousands of jobs and weakening job security for those still employed as layoffs continue unabated. This section reviews current economic trends as they relate to the state of the workforce.

Gross domestic product (GDP) declined 1.3% in the third quarter of 2001, its slowest pace in more than eight years, as businesses aggressively reduced inventories and investment spending. GDP is the total market value of all final goods and services produced, or what firms and households and government make in profits, sales, wages, dividends, etc. As a single measure of economic health, GDP reflects how profitable firms are, as well as how household incomes are faring; thus, growth in the GDP signals economic improvement, whereas a contraction in the estimate indicates economic decline.

As corporate profits and productivity fell, many of the country's largest corporations responded by cutting their workforces, resulting in reduced consumer confidence and spending; this typically causes a further slowdown of the economy since consumer spending is the main engine to US economy. The most worrisome consequence facing workers in a situation like this is a tight labor market. As firms seek to limit losses, demand for labor sharply decreases. The current downturn has affected certain sectors of the economy more than others, with major layoffs and hiring freezes taking place in manufacturing, as well as telecommunications, tourism, travel, and information technology and services.

Companies respond in different ways to a slowdown in their business, although layoffs remain the most predominant cost-cutting strategy. Alternatives to layoffs were featured in a recent *Forbes* article that highlighted companies that employed cost-cutting strategies while resisting layoffs. Representatives from these companies said their decisions were based on long term planning rather than pleasing stock analysts in the short run. The article observed that many companies found that holding onto employees

through hard times lowers employment costs long-term; it is costlier to fire and then recover skilled labor they fought to hire or train. There are also benefits in inspiring company loyalty among employees and customers; such companies are often perceived as more stable, which is attractive to customers, and increases employee satisfaction, performance, and productivity. In addition, companies that imposed big cutbacks have failed to perform any better in the stock market than rivals that did not, and those with large layoffs (15% or more) performed below average (*Forbes* 2001).

### **Characteristics of Work**

As the economy and related social institutions change, many features of work itself have changed, including characteristics such as job tenure, work hours, and work arrangements. Tracking and understanding these changes is essential to understanding the conditions under which workers must operate.

Although it is nearly impossible to talk generally about the condition of work for workers, given inordinate disparities among workers in working conditions, compensation, and flexibility, social scientists do so to offer ‘snapshots’ of the labor market. However, these generalizations should always be tempered with a reminder that the conditions for workers vary widely. The following discussion reviews changing work structures for workers in general with an understanding that these structures vary a great deal *among* workers.

Researchers agree that lifetime employment among men is being replaced by frequent job changes and more tenuous job security (Carnoy and Castells 1998; see also Bailey 1995; Mishel, Bernstein, and Schmitt 1999; McConnell 1996; Ackerman et al. 1998). Job tenure is strongly associated with job security and earnings; male workers with strong employer attachments earn an average of \$57,000, men with a medium attachment earn \$49,000, and men with a weak attachment earn \$28,000 (Mishel, Bernstein, and Schmitt 1999). Blacks have experienced the strongest declines in job stability, particularly among workers with longer job tenures (Neumark, Polsky, and Hansen 1999).

Work hours are a key indicator of job quality, related both to productivity and stagnating wages. Recently, workers are spending more time at work on average. Average annual hours worked increased by 0.4% per year from 1979 to 1989, and by 0.3% per year from 1989 to 1996 (Mishel, Bernstein, and Schmitt, 1999). Employers stay flexible by increasing work hours rather than adding new hires, and workers put in more hours to compensate for stagnating or declining wages.

Even though total hours worked is increasing, part-time work is increasing as well. As shown in Table 1, part-time workers (fewer than thirty-five hours per week) increased from 15.7% of the workforce in 1973 to 16.7% in 1998. Voluntary part-time employment, which accounts for more than three-fourths of the total, grew slowly in the 1970s and 1980s before declining in the 1990s. The number of involuntary part-time workers, those who are working part-time because they cannot find suitable full-time employment, increased even more during the recent expansion.

Involuntary part-time work falls under the category of underemployment, or work that is inadequate to sustain the cost of living. Involuntary part-time workers, seasonally employed workers, the working poor, and temporary workers all fall into this category (Lichter 1988). The labor force also consists of a category of workers referred to as the working poor. In 2000, 4.7% of the total labor force that worked 27 or more weeks out of the year was classified as working poor. A majority of the working poor were employed full-time.

The National Commission on Employment and Unemployment Statistics (NCEUS) has argued that official government statistics routinely underestimate joblessness and related employment problems. They contend that the unemployment rate is conservative and camouflages a great deal of inequality (NCEUS 1979). Alternative measures are used to identify the extent of ‘hidden unemployment’ in the form of workers employed in inadequate or marginal jobs and workers who are discouraged from looking for work.

Underemployment is subdivided into four categories: subunemployment, or those not looking for work because they believe that work is not available; unemployment, the official definition of unemployment which includes those who are currently out of work and have actively looked for work within the past four weeks; underemployment by low hours includes workers employed fewer than 35 hours/week because they could not find full-time work; and underemployment by low income which includes workers whose earnings are less than 1.25 times the official individual poverty threshold. Workers in these categories are marginalized in the labor market and their experiences are often overlooked in aggregate statistics.

These trends show that employers are getting the *staffing flexibility* they want, but with an accompanying decline in job *security* for employees. Trends in contingent and alternative work arrangements tell more about these trends.

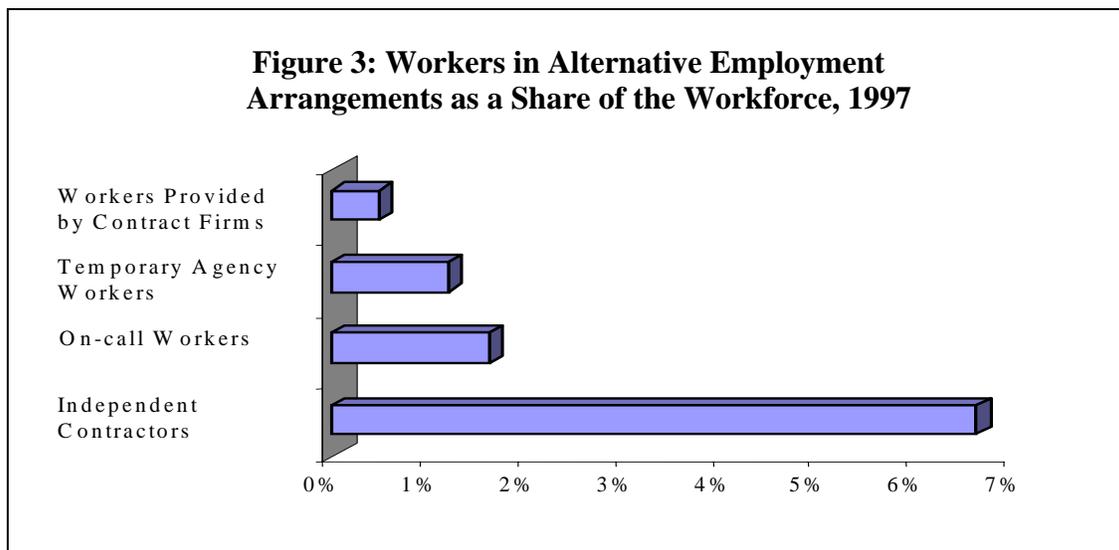
<b>Table 1: Part-time Workers as a Share of the Nonagricultural Workforce</b>					
	1973	1979	1989	1992	1998
All Part-time	15.70%	16.70%	17.20%	18.00%	16.70%
Voluntary Part-time	2.90%	3.60%	4.10%	5.40%	2.70%
Involuntary Part-time	12.80%	13.10%	13.10%	12.60%	14.00%

*Source:* Analysis of U.S. Bureau of Labor Statistics data

Copious research documents an increase in contingent jobs and alternative work arrangements. *Contingent jobs* are “jobs that are structured to be short term or temporary” (Hipple 1998). These include employees hired with short-term contracts, workers hired through temporary agencies, and sometimes workers who are employed by a contracting company. Under the Bureau of Labor Statistics’ definition, there were 5.6 million contingent workers in 1997, representing 4.4% of the workforce (Hipple 1998).

In general, contingent workers were younger and more likely to be African American or Hispanic American than non-contingent workers. They were also far more likely to be part-time workers. Surveys indicate that most contingent workers are not in their current situation by choice. Nearly three-fourths would rather hold a non-contingent job. Earnings for full-time contingent workers were 80% of the average for full-time non-contingent workers, and contingent workers were far less likely to have health benefits or pensions (Hipple 1998).

*Alternative work arrangement* is a broader concept that includes anyone who is not a permanent wage and salary employee. As defined by the Bureau of Labor Statistics, this includes workers who are independent contractors, on-call workers, temporary help agency workers, workers sharing one full-time job with other part-time employees, and workers provided by contract firms (Cohany 1998). Two-thirds of independent contractors were men, and they were older, better educated, and better paid than traditional workers as well as workers in other categories with alternative arrangements. By contrast, employees of temporary help agencies were more likely to be young, female, African American or Hispanic American. Their earnings were substantially less than those of traditional workers, and only a third preferred their work arrangement to a traditional arrangement. Workers employed by contract firms earned more on average than workers with traditional jobs, but women who worked for contract firms earned only 64% of men in this arrangement (Cohany 1998).



Source: U.S. Bureau of Labor Statistics

The number of workers employed by temporary help agencies increased more than 11% each year between 1972 and 1995 and now account for more than two million people. The hourly wages of all temporary workers were 22% less than those of permanent workers in 1993 and temporary workers are much less likely to have health benefits (Segal and Sullivan 1997).

These trends indicate that temporary agencies are playing a role as intermediaries between some workers and employers. The use of temporary workers allows employers to handle fluctuating workloads and for the increased screening of potential candidates for permanent jobs; employers see this as a way to reduce the employment costs of hiring and firing, and of avoiding low employee morale that ensues during frequent layoffs. Many employers use non-unionized temporary workers to implement a de facto two-tier wage structure.

### **Telecommuting/Flexiplace**

Telecommuting is an alternative work arrangement that has become common among some occupations and industries but, for most employers and workers, is being adopted quite slowly. Some observers hold that the practice offers great potential for vastly changing the traditional workplace culture. Although as of early 1999, only about 8% of all workers telecommute, this figure represents several million employees (Heldrich Center for Workforce Development and Center for Survey Research and Analysis 1999). Between 1992 and early 1993 the number of telecommuters rose by 1 million, from 6.6 million to 7.6 million workers (Niles 1994). The availability of the technology to conduct work both at home and at the worksite, combined with advancements in technological speed, quality, and worker proficiency have made telecommuting an attractive option to many employees. However, the option is currently disproportionately available to workers in higher income brackets, with more education, and working in professional or technical occupations (Heldrich Center for Workforce Development and Center for Survey Research and Analysis 1999).

The increasing number of homes with Internet access, combined with the challenges employees and employers face when negotiating childcare and family responsibilities, provide sound rationale for continuing the expansion of telecommuting opportunities (Gil Gordon Associates, 1999).

### **Workers and the Labor Force**

The previous sections have highlighted demand-side factors that affect work. Supply-side factors, or the supply of labor to the workforce, also have important implications for work opportunities. The composition of the labor force is subject to a multitude of factors such as population shifts, immigration flows, vacillating demand for workers, changing social norms, and changes in the economy and opportunities for work. These fluctuations shape the contours of the workforce and influence the labor market outcomes of current and potential workers. The following discussion will provide a profile of the current labor force and review projections of how the labor force is expected to change over the next decade.

The labor force consists of individuals currently employed in a job or actively seeking work (unemployed), according to the federal definition. A demographic profile of the U.S. labor force is shown in Table 2. Of the total U.S. population 16 years and older, 67.1% are in the labor force and 32.9% are considered not in the labor force. Those counted as not in the labor force are those 16 and over, not currently employed and not

actively seeking work. This includes those in school/students, homemakers, retired, and discouraged individuals no longer looking for work. Ninety-five percent of those in the labor force are employed and 4.2% are unemployed (By 2002, the unemployment rate had climbed to 5.9%). The labor force is predominantly white and somewhat more male than female. The labor force (46%) consists mainly of workers between the ages of 25 and 54.

	As a Percent of Labor Force	Unemployed	% of Population Not in Labor Force
Total		4.2	32.9
Sex:			
Male	53.5	4.1	25.3
Female	46.5	4.3	40.0
Race:			
White	83.6	3.7	32.7
Black	11.7	8.0	34.2
Hispanic	10.5	6.4	32.3

*Source:* U.S. Census Bureau, Statistical Abstract of the United States, Section 13, Tables 643 and 645

A majority of those in the labor force (57.4%) have some college education. White workers are more likely than black or Hispanic workers to be a college graduate. Hispanic workers are more likely than any other group to have not completed high school.

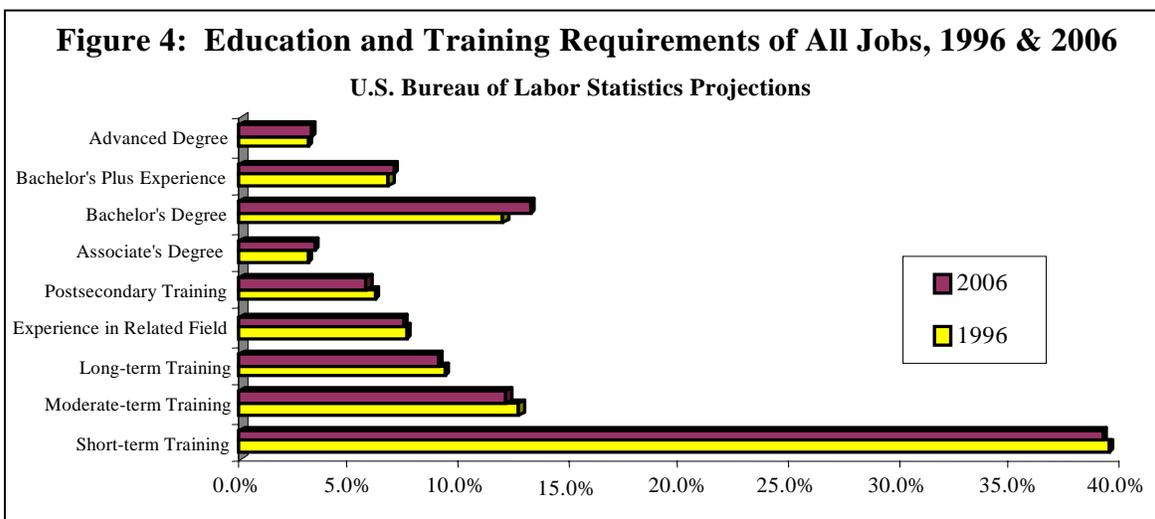
Two significant trends are expected to have an enormous impact on the labor force and work, according to the Bureau of Labor Statistics. First, the labor force will continue to age as the baby boom generation approaches retirement. Secondly, the workforce will become increasingly diverse as African Americans, Hispanic Americans, and Asian Americans, and women to a lesser extent, become a larger proportion of the labor force. The acceleration and consequences of these changes have the potential to radically reshape the labor force. An aging workforce very likely will result in changes in the supply of skills and the need for a wide variety of services. Additionally, a more diverse workforce will intensify current issues of equitable access to employment, education, and training.

The overall growth rate of the labor force is projected to increase by 12% over the period, 1998-2008. The labor force aged 45-64 will grow faster than the labor force of any other age group as the baby-boom generation (born 1946-64) continues to age. The labor force 25 to 34 years of age is projected to decline by 2.7 million, reflecting the decrease in births in the late 1960s and early 1970s. The labor force participation of women in nearly all age groups is projected to increase. Women's share of the labor force will increase from 46% in 1998 to 48% in 2008. The Asian American and other labor force and the

Hispanic American labor force are projected to increase faster than other groups, 40% and 37%, respectively, due to high net immigration and higher than average fertility. The African American labor force is expected to grow by 20%, twice as fast as the 10% growth rate for the white labor force. The Asian American and other share of the labor force will increase from 5 to 6 percent and the Hispanic American share from 10 to 13 percent. White non-Hispanics accounted for 74% of the labor force in 1998. Their share of the labor force in 2008 will decrease modestly to 71%. By 2008, the Hispanic American labor force will be larger than the black labor force.

## B. THE NEW OCCUPATIONAL HIERARCHY AND CHANGING SKILL REQUIREMENTS

An increasing number of studies documenting both the shift in the occupational hierarchy towards occupations with higher skill requirements and a general increase in the skill requirements across a wide variety of occupations signal that employer demand for skilled workers has increased. This trend began in the post-World War II period and has persisted ever since. Occupations with higher education and skill requirements have grown faster than those occupations with lower skill requirements. Even occupations generally considered to be relatively lower-skilled, require more technical proficiency now than in years past. A number of recent studies have documented increasing skill levels in a range of manufacturing and service industries (also see Bailey 1995; Ackerman et al. 1998). Still further evidence reveals that since 1950, the share of professional and skilled workers grew from 40% of the workforce to 80% in 1997 (Stuart 1999; also see Carnevale and Rose 1998). The supply of low skilled jobs has decreased drastically as manufacturing sector contracts and automation technology becomes more prevalent.



Source: U.S. Bureau of Labor Statistics

Based on current estimates of education requirements for specific occupations, the share of jobs requiring a bachelor's degree or higher is expected to increase only marginally from 22% in 1996 to 23% in 2006. Jobs that require no postsecondary education or training will still constitute two-thirds of employment in 2006. In addition, although 34% of the job growth between 1996 and 2006 will be in occupations requiring a college degree, only 24% of job *openings* over the decade will be in these occupations. This is because workers exit low-skill occupations at a faster rate than high-skill occupations, leaving a larger number of openings to replace workers in existing jobs.

Employment in all education and training categories that generally require an associate's degree or more education is projected to grow faster than the 14% average for all occupations. In contrast, all other categories are expected to grow less than 14%. Occupations generally requiring an associate degree are projected to grow 31%, faster than all other education categories over the 1998-2008 period.

Technological change accounts largely for the rapid increase in high-skilled jobs in two central ways: 1) it creates demand for operators, creators, maintainers of technology and 2) it creates entirely new types of work and commerce that typically require a specialized set of skills. The creation of technical and higher skilled jobs has also outpaced the decrease in low skilled jobs, particularly in the manufacturing sector. The globalization of industrial manufacturing has contributed to a decline in the lower-skilled assembly jobs associated with goods production as corporations move production to countries with lower labor costs, lower taxes, and fewer regulations. Also, mechanization through technology has eliminated many low-skilled jobs.

### **Identifying the Kinds of Skills that Employers Are Looking For**

Information technology is one of the key catalysts in these trends. As was the case with earlier production technologies, computers and communication networks eliminate the need for some skills, expand the use of others, and create entirely new functions requiring new combinations of skills. What makes computers adaptable to so many situations is their flexibility and transferability. Widespread computer use progressively lowers the costs of computer technology as innovation unfolds. This has led to the wide application of computers in almost every sector of the economy—giving it a more pervasive influence than anything since the steam engine and the telephone (McConnell 1996).

Information technology influences the demand for skills in two different ways. First, it creates jobs that require skills to *develop, operate, and repair* computers and information networks. Second, it changes jobs in ways that require skills that *use technological capabilities and new organizations of work*. The first set of skills often gets more attention, but the second set of skills has the most far-reaching consequences.

In the 1990s the Internet and local and wide-area networks have generated rapidly growing opportunities for systems analysts, network administrators, software programmers, and content developers. The number of IT workers is growing more rapidly than every other category. In 1997, an Information Technology Association of

America survey estimated that there were 190,000 unfilled IT positions, from financial services to telecommunications. Despite this phenomenal growth, these workers still represent only 1.6% of the workforce. As a result of the continued proliferation of computers in a wide-variety of workplaces, computer literacy requirements for many jobs are rapidly increasing (Ralls 1994). Non-IT jobs require computer skills, from offices to industrial and commercial settings.

Technological advances have also encouraged more flexible work processes and new organizations of work, which in turn have resulted in added responsibilities for employees. Competition and product proliferation have generated a wider array of products and services, requiring middle-level employees to develop more extensive product knowledge and customer service skills, to perform a wider variety of tasks and to improve communication with coworkers and supervisors (Bailey 1995).

These new work processes and organization demand a wider-range of responsibilities and thus skills from employees, including problem-solving abilities, interpersonal skills, and adaptability to change. Companies are adopting flatter organizational structures, which generally result in a need for more flexible and highly trained workers (McConnell 1996).

### **Acquisition of Education, Training, and Skills**

As the importance of and return to education rises, access to education, and quality education, remains a major problem. High school graduates with parents who have low incomes or low educational attainment are less likely to attend college than students with high-income or well-educated parents. Variations in educational quality and disparities in school funding are as much of a concern as educational attainment. People with jobs will continue to need training, even highly skilled workers who need frequent skills upgrades to stay abreast of rapidly changing work environments.

The acquisition of skills and education is a critical issue for workers and the economy, particularly with respect to productivity. While the real earnings of college-educated workers have grown since 1979, the earnings of all others have not (Carnevale and Rose 1998). Educational attainment is one of the foremost determinants of wages between high and low-wage workers. In addition to the widening income gap between college- and non-college-educated workers, there is also a distinction between the wages of those with some college education and college graduates. Those with some college education are more similar to those with a high school degree than to those with a college degree. Other research has shown that any college education makes a difference, regardless of the type of school or whether a degree is earned. Earnings vary based on the number of years in college, as well as by whether students obtain a terminal degree (Carnevale et al. 1990). Even without completing a degree, those attending a 2-year college earn as much as 10% more than those without any college education, and the labor market returns per credit are the same for those enrolled in 2-year and 4-year colleges. Additionally, women may receive a greater benefit from college upon receiving an associate's degree, whereas for men an added value in completing a degree only appears after receipt of a bachelor's degree (Kane and Rouse 1995).

Workers have responded to the increased demands for skills and, as a result, high school completion and college enrollment has increased. High school completion rates have increased considerably in the 1980s and 1990s. The high school dropout rate among prime-age workers has declined from 54% in 1959 to only 10% in 1996 (Carnevale and Rose 1998). The educational attainment of adults has risen steadily since 1950 and the share of those with at least four years of college rose from 6% to 24%.

As labor market outcomes become increasingly dependent on educational attainment, equal access to quality education becomes more of an issue. Inequality and access to education are still major problems. High school graduates with parents who have low incomes or low educational attainment are less likely to attend college than students with high-income or well-educated parents, even for students with similar achievements in high school. Further, the influence of family background on college enrollment appears to have grown, in part because of the rising cost of a college education. The share of students in the lowest quartile of family earnings who enrolled in four-year colleges declined slightly, from 29% in the early 1980s to 28% in the 1992. In contrast, the share of college-bound students in the highest quartile rose from 55% to 66%. Among low-income graduates, 40% did not enroll in any kind of postsecondary education, while only 10% of high-income students did not continue with school or training (Ellwood and Kane 1998).

Educational quality is just as important as educational attainment. Patterns of residential segregation relegate minority children at all class levels and many working class and poor white children into lower quality schools that have a fraction of the funding and resources of middle-class, white schools. Since most schools receive close to half of their funding from local sources, this system puts low-income communities at a disadvantage (see Yaro and Hiss 1996). As a result, a significant portion of the workforce is unprepared to enter the labor force.

In addition to college education, training needs for those currently employed are also of interest. For less skilled workers, literacy skills are critical for expanding employment opportunities. A surprisingly large number of adults lack the minimal skills for success in a knowledge-based economy. For example, over 20% of adults have literacy and numeracy skills below a fifth-grade level, while another 25 to 28% have skills between a sixth- and eighth-grade level (Stuart 1999). Literacy skills have a strong relationship to employment status and income, with those who have low levels of literacy skills more likely to be unemployed, or to be employed in declining industries, and to have incomes in the lowest quintile (Organization for Economic Cooperation and Development 1995).

A variety of institutions meet these training needs, from formal employer and union training programs to community colleges that provide increasing numbers of continuing education courses and contract training for employers. Some studies have shown that formal company-provided training adds the greatest value to worker productivity and earnings. However, college-educated workers are much more likely to receive such training—about 90%, compared to only 60% of high school-educated workers (Stuart 1999). Continuing education programs are also an important component of the

workforce development system. Over 40% of adults not enrolled in school participated in some form of adult education in 1995, and half of these were enrolled in work-related courses. Adult, part-time enrollments are increasing at both two- and four-year institutions, and employers report an increase in training provided or contracted for (Stuart 1999). In addition, welfare-to-work policies are likely to create additional demand for basic skill and work readiness training.

### C. WORK, WORKERS AND INEQUALITY IN THE LABOR MARKET

For the past two decades, stagnant wage growth and increasing occupational and wage inequality have been major features of the U.S. labor market. These changes have taken place in the midst of unparalleled economic growth and prosperity. Given the character of inequality as outlined in this section, policymakers should apply labor market interventions that reflect the specific and varied circumstances of regional labor markets. This section will examine several dimensions of labor market inequality and explanations for persistent inequality.

Dimensions of inequality among workers range from wages, benefits, job stability, mobility opportunities, to autonomy, although the most widely cited measure of inequality is wages. Inequality is prominent among different demographic groups, between occupation levels, different industries, different education groups, and across different regions in the country. Most importantly, it exists at every strata of the occupational hierarchy.

Labor market trends do not uniformly or evenly affect all workers, regions of the country, local labor markets, or even different communities within local labor markets. They vary regionally, across various demographic groups, across different sectors of the economy, and across different occupations. Incomes, types of industry, natural resources, goods and services produced, cost of living, and labor supply vary in scale and scope across sub-markets in the U.S. Region-specific economies such as manufacturing in the Southwest Sunbelt, the entertainment industry on the West Coast, the computing industry in the Pacific Northwest, farming and forestry in the Midwest, and areas of economic underdevelopment, such as Appalachia and some urban communities are built upon, have developed and hold capacity for different levels of financial and human capital to support productivity, workforce demand, and income growth. Thus, policymakers must exercise caution when designing ‘national’ policies that will have varying effects across these different submarkets.

	Hourly	Annual
1967-1973	2.9%	2.5%
1973-1979	-0.1%	0.1%
1979-1989	0.4%	0.9%
1989-1996	-0.2%	0.2%

Source: CPS data as reported in Mishel, Bernstein, and Schmitt

## Earnings Inequality

Disparities in earnings represent one of the most critical dimensions of labor market inequality. Between the end of World War II and the early 1970s, wages grew strongly and wage inequality declined. Since that time, wage growth has slowed and earnings inequality widened (Mishkin 1995). The slow growth of average earnings can be seen in Table 3. Data from the Current Population Survey (CPS) indicate a substantial slowing in hourly wages and annual earnings since 1973. The CPS data show that real hourly wages, after growing by 2.9% per year from 1967 to 1973, grew by an average of only 0.1% from 1973 to 1996.

Slow earnings growth exacerbated inequality during the 1980s and 1990s, translating into declining real incomes for those at the bottom, and in many cases, even for those in the middle. Earnings inequality rose sharply in the early 1980s and was either flat or increasing at a more modest pace from the mid-1980s to the mid-1990s. The wage differential between workers with college degrees and workers with high school degrees or less has grown substantially, particularly in the 1980s. The gap between the earnings of women and men has decreased over the last two decades (Bernstein and Mishel 1997).

Given wide variations in the nature and extent of inequality, the underlying forces driving inequality are numerous and diverse. In the early to mid-1980s, inequality appears to have resulted from declining earnings by low-wage workers, particularly those in manufacturing. From the late 1980s on, earnings at the very bottom of the pay scale increased some, while those at the top increased substantially. The largest deterioration in average wages occurred for middle-income workers (Mishel, Bernstein, and Schmitt 1999).

The peaks and troughs in the business cycle are a key factor in changing inequality between workers. Of chief concern is the observation that shifts in aggregate employment and unemployment levels, which fluctuate with the business cycle, disproportionately affect lower-wage workers.

The factors responsible for the decline in earnings vary across industry, groups of workers by education level, and demographic categories. International competition took a steep toll on manufacturing production jobs in the 1980s, particularly during the 1980–82 recession when the largest increases in earnings inequality appear to have occurred. When combined with the more aggressive anti-union practices spawned by the 1981 air traffic controllers' strike, this factor can explain much of the decline in wages of low-skilled workers in the 1980s. For professional/managerial workers, the early 1990s were characterized by a downsizing of midlevel managers, enabled by technology but driven by deregulation and increasing competition in the office and service sectors. Finally, increases in the minimum wage and the Earned Income Tax Credit (EITC) in the 1990s appear to have lifted earnings for the lowest-skilled workers (also see Howell 1996; Ackerman et al. 1998; Mishel, Bernstein, and Schmitt 1999).

## **Inequality and the Structural Organization of the Labor Market**

The organization of the labor market itself creates and reproduces inequality among workers. There are two key structural features of the labor market that stratify workers: labor market segmentation and occupational segregation. Labor market segmentation refers to the separation of industries into two major sectors in the private domain of the U.S. economy: a core sector composed of large firms with a great deal of control over their markets and economy in general; and a periphery sector that consists mostly of smaller, single-product firms with few resources and little control over the market. Workers in the monopoly sector generally have higher earnings, better job stability, and benefits than workers in the competitive (periphery) sector. This tier structure has been used to explain why workers in similar occupations and with the same educational attainment have different earnings.

Occupational segregation refers to the overrepresentation of undervalued groups into low status jobs. Occupational segregation is the key structural feature of the labor market responsible for pay inequity between women and men and to a lesser extent, between different racial groups. Women are disproportionately overrepresented in certain types of occupations in the labor market, referred to as female-typical jobs, and men are disproportionately overrepresented into another set of occupations, or male-typical jobs. On average, female-typical jobs pay less, have fewer advancement opportunities, benefits, autonomy, etc. than male-typical jobs. Most importantly, differences in educational attainment or skill levels do not fully explain this phenomenon. This same pattern of occupational segregation has been applied to racial disparities in the labor market. Although, occupational segregation by race is significantly less than that by gender, it has been found to be a salient factor in racial disparities in wages and other labor market outcomes. Minority workers are much more likely to be segregated into lower paying jobs with fewer advancement opportunities than are white workers. Thus, labor market segmentation and occupational segregation both indicate that a worker's location or position in the labor market is a determinative factor in his or her labor market outcomes and, in concert with factors such as education, play a key role in stratifying workers.

### **Access to Job Opportunities**

The question of how workers get jobs, and particularly how they get *good* jobs, is one that has confounded policymakers for some time. A critical question then is: how do people get access to job opportunities? Policymakers have often overlooked the fact that an individual can only pursue opportunities he or she knows about, and has access to, knows *how* to pursue, and knows what training to acquire.

Among those who have been successful at finding a job, a majority of them found their jobs through informal means, and more strikingly, a majority of those workers did not initiate the contact, but were contacted by either the employer or an employee of the future employer (Granovetter 1994). Thus, it is reasonable to conclude that instead of people looking for jobs, jobs look for them. The importance of being known in a good social network accounts for this phenomenon. It is impossible for any one individual to

know of all job opportunities as they become available. However, if that individual has access to a social network along which information about job opportunities is distributed, their odds of coming into contact with opportunities they would not have otherwise known about increases. There is evidence that jobs obtained through social networks are much more likely to be better jobs. Employers prefer to use social networks in the hiring process, particularly because it pre-screens the labor pool (Granovetter 1994). Fernandez and Weinberg (1997) study of hiring practices at banks found that referred applicants were 10 times more likely to be hired than non-referred applicants. They also found that referred applicants presented more appropriate resumes, indicating that inside information gave them an advantage over non-referred applicants.

Even the all-important role of education in job outcomes is thrown into question when social networks are taken into consideration. Lin, Vaughn, and Ensel (1981) found that the effect of education on job outcomes is partially a result of having access to higher status contacts, which higher educated individuals most often have. This forces us to reconsider the role of education in employment interventions; providing education in a vacuum may be less useful for people who do not have ties to social networks that are critical to successful job outcomes. The quality of job opportunities to which an individual has access is directly related to the quality of his/her social networks; most importantly, access to quality social networks is a function of the job seeker's location in the socioeconomic structure. Information about jobs is distributed among social networks, which themselves are segregated. We know that there are systematic ways in which information about and job opportunities is distributed.

Researchers have found significant race differences in the use and effectiveness of social networks to gain employment. Hispanics who rely on network sources get poorer results from their job searches than do those who effectively use formal search methods. Blacks whose job contacts are simultaneously friends, relatives, neighbors or coworkers (multiplex contacts) get lower-paying jobs than other blacks. The opposite outcome is conferred on whites (Green, Tigges, Diaz 1999). Granovetter, (1974) argues that individuals who are strongly tied to job searchers through multiple relationships are likely to have similar experiences and characteristics as the job searchers, and therefore will probably not gain much new information, although Green, Tigges, Diaz' (1999) work showed that this may vary strongly by racial group. The highest labor market gains come through weak ties that provide a bridge to groups with whom subjects would not otherwise be connected, such as high-status ties for low-status job seekers (Lin, Ensel, and Vaughn 1981).

Job information networks are often geographically segregated. Kirschenman and Neckerman's work in Chicago revealed that often employers use geographically restricted job information networks to distribute information about job opportunities. Patterns such as these make residential segregation a prominent issue with respect to access to job opportunities.

Wilson (1996) suggests that residential segregation plays a role in limiting access to work in that blacks segregated into neighborhoods with fewer resources have little to no access

to job information and other social networks which are crucial to gaining access to opportunities in the labor market to which their white counterparts are privy.

Residential segregation is defined as the uneven distribution of minorities and whites across residential neighborhoods within a city, resulting in the concentration of minorities and whites in different parts of the city. This pattern can spatially restrict minorities' access to job opportunities via spatial mismatch. Spatial mismatch theory posits that mainstream economic opportunities (i.e. jobs) are concentrated in mainstream areas, from which minorities are excluded as a result of residential segregation. As companies relocate to the suburbs, minorities are segregated into areas that are left behind and consequently isolated from burgeoning job opportunities.

Another mechanism by which residential segregation exacerbates racial economic inequality is that it perpetuates schooling inequality. Enormous disparities in school funding, usually tied to the neighborhood in which the school is located, have created similar disparities in school quality. Thus, children have access to valued resources and quality schools only by virtue of the neighborhood in which they are raised. Given the importance of education in labor market chances, this inequality is detrimental to the notion of equality of opportunity.

#### **D. IMPLICATIONS FOR FUTURE RESEARCH**

**A**s the economy changes, occupations and industries grow and contract, and along with them, opportunities and barriers for workers change. It is essential to monitor new directions the economy may take by proactively tracking emerging commerce as potential sources of opportunities for workers.

Technology, global competition, changing regulatory environments, and other factors create pressures on employers to lower labor costs, keep inventories lean, and reduce product cycle time. As a result, many employers are cutting labor costs by cutting workforces, hiring fewer permanent employees, and contracting work out to temporary employees. These issues become more pressing as the quality of jobs at all strata decreases, increasing competition among workers for fewer good jobs. Trends such as increasing job turnover, involuntary part-time work, poverty despite work, and permanent unemployment are likely to continue as the employer-employee relationship continues to weaken. As the average number of job changes increases, the need to re-train and place dislocated workers has increased, particularly as the adequacy of work has become more tenuous.

In addressing these challenges it will be necessary to devise both short-term and long-term interventions; training and education are only part of the solution. Policymakers and researchers will need to adopt a more comprehensive approach to understanding how and why some workers are marginalized in the labor market. Examining multiple dimensions of inequality in the labor market—total compensation, advancement opportunities, access

to job information networks, and worker autonomy, in addition to pay—is an important preliminary step in this process.

A social network analysis will help identify strategies that workers use to find jobs and most importantly, which are good strategies and which are poor strategies. This approach draws on a body of research that examines the job search process, hiring patterns and the ways in which social networks serve as a central organizing framework in both.

It would also be desirable to systematically investigate hiring and promotion patterns, and for policymakers to provide leadership in the development of standardized hiring models for employers; models that rely on objective criteria in the hiring process and make job opportunities more widely available to all workers.