CHAPTER 2

Skills for the U.S. Workforce

A strong U.S. economy requires a skilled and well-educated workforce that is prepared to meet the challenges presented by a rapidly changing world economy. Research has found, for example, that countries with higher levels of education and higher average math and science test scores experience faster economic growth. For more than a half-century, the United States experienced an extraordinary rise in education levels and still maintains one of the best-educated populations in the world. But in recent years, improvements in educational attainment have slowed. Today, for example, younger Americans are less educated, on average, than their counterparts in a number of advanced countries. In addition, U.S. high school students also score below students in most other advanced countries in their math and science skills. To remain competitive in the global economy, the United States needs to improve the education and skills of its residents and prepare them for jobs that will be available in the future.

This chapter discusses the importance of the education and skill levels of the U.S. workforce, the contributions of legal immigrants to the skills of the U.S. workforce, and the importance of upgrading workforce skills through job training. The key points of this chapter are:

- Education is a key contributor to economic growth and individual income.
- Advances in education levels have slowed over the past 25 years. This slowdown could jeopardize the U.S. standard of living in years to come.
- Legal immigrants make up a vital part of the U.S. economy, particularly in the science and engineering sectors.
- Workers need to continually upgrade their skills if they are to adapt to and take part in a continually changing economy.

By setting its sights on improving the education and skills of U.S. workers, the United States can create a workforce that will thrive in the fast-changing world economy.

Educational Achievement in the United States

Both economic research and common sense suggest that workers' skills play a critical role in economic growth and individual well-being. In the past, rapid increases in schooling levels helped to raise the U.S. standard of living, but in

recent years improvements in educational attainment have slowed. Unless the United States can improve the educational achievement of its residents, it may be difficult to sustain rapid economic growth in the future.

Workforce Skills and the U.S. Standard of Living

Education and Income

Economic research suggests that educational attainment and test scores are important at both the individual and the national level. At the individual level, people with higher levels of education have higher earnings than people with less education. In 2004, workers with a bachelor's degree only (no advanced degree) earned almost $23,000 more per year on average than workers with a high school degree only (see Table 2-1). These differences have grown over time: In 1975, workers with only a bachelor's degree earned $14,220 more per year (in 2004 dollars) than high-school educated workers. According to a U.S. Census Bureau study, over his or her lifetime, a worker with only a bachelor's degree earns nearly $1 million more (in 2004 dollars) than a worker with a high school degree only.

In addition to income, schooling levels are associated with other positive economic and social outcomes. More-educated adults are less likely to be unemployed or incarcerated than less-educated adults. More-educated adults are healthier and have lower mortality rates than less-educated adults. They are also more likely to have college-educated children, thereby passing the benefits of higher levels of education on to future generations.

Studies have also shown that higher test scores are associated with higher wages and more years of schooling. High school students with higher test scores are more likely to attend college and, if they attend, are more likely to graduate. Controlling for individuals' educational attainment and family background, those who score higher on achievement tests in high school have higher wages later in life.

TABLE 2-1.—*Average Annual Earnings by Education (2004 dollars)*

	1975	1990	2000	2004
Bachelor's degree only	39,065	43,591	54,396	51,568
High school degree only	24,845	24,968	28,179	28,631
$ difference	14,220	18,623	26,217	22,937
% difference	57%	75%	93%	80%

Note: Data refer to all workers aged 18 and older.

Source: Department of Commerce (Bureau of the Census).

Education and U.S. Standard of Living

Higher schooling levels and test scores do not just improve individual outcomes, they also raise the standard of living for the country as a whole. More-skilled workers are typically better at identifying, adapting, and implementing ideas that lead to higher productivity growth. Productivity growth raises the standard of living because it leads to real increases in workers' wages. Research has found that, all else equal, countries with higher levels of education and higher average math and science test scores experience faster economic growth. A recent study of U.S. growth between 1950 and 1993 found that one-third of productivity growth over this period was due to increased levels of education.

Education and skills are critical for economic growth, but other factors, such as openness to trade and government institutions that protect private property, are also important. The United States tends to score highly in these areas compared with its international peers, which may help to explain why the United States has experienced faster economic growth than most other advanced countries over the last decade.

Educational Attainment

For more than a half-century, education levels have been rising in the United States. In 2004, about 85 percent of adults aged 25 and older reported that they had completed high school; 28 percent of adults had attained a bachelor's degree or higher (see Chart 2-1). This is an extraordinary rise since the mid-twentieth century, when only about 36 percent of adults had a high school diploma and around 6 percent had a bachelor's degree or higher.

This rapid rise in educational attainment came about mainly because, for many years, each generation was more educated than the one before: Each generation was more likely than the previous one to have completed high school or attained a bachelor's degree. As older, less-educated workers retired and younger, more-educated workers entered the workforce, the overall education level of the U.S. workforce grew rapidly.

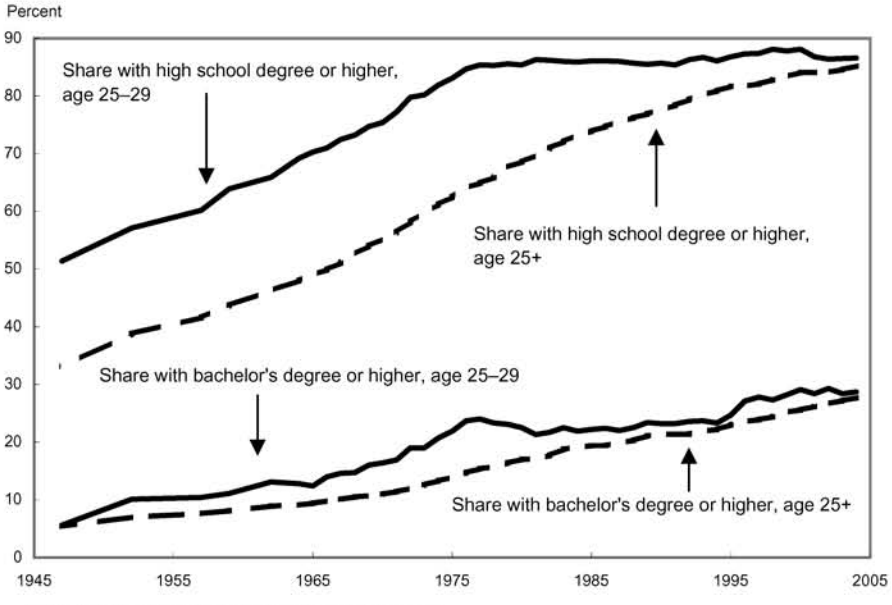
Over the past 25 years, however, this pattern has changed. According to some measures, younger generations have been no more educated than previous ones. The share of U.S. residents aged 25–29 who have completed high school has remained relatively constant over this time, staying within a range of about 85 percent to 88 percent (see Chart 2-1). Over the same period, the manner in which people complete high school has changed. People counted as having completed high school include both those who graduate from high school and those who receive a General Education Development (GED) certificate or another alternative to a regular high school diploma. (The GED is a certificate awarded to applicants who pass a specific,

approved, high-school equivalency exam.) Over time, GED recipients have made up an increasing share of this group. In 1999, of 18- to 24-year-olds who had completed high school, about 11 percent obtained a high school credential via a GED, up from 5 percent in 1988. While GED recipients are counted as people who have completed high school, studies suggest that they are not equivalent to high school graduates in their economic outcomes. For instance, GED recipients have lower earnings and are less likely to obtain post-secondary education than are high school graduates. These differences in economic outcomes are of concern given that GED recipients make up an increasing share of those who have completed high school.

Unlike the share of people who have completed high school, the share of people aged 25–29 who have a bachelor's degree or higher has continued to rise. This share, however, is rising more slowly than it was 25 years ago. Over the past 25 years, it rose 6 percentage points, from 23 percent in 1979 to 29 percent in 2004. In contrast, in the 25 years prior to 1979, it increased by about 13 percentage points, or more than twice as much.

Although schooling levels, already relatively high in the United States, cannot grow indefinitely, international comparisons of educational attainment suggest that the United States still has great potential for increases in the schooling levels of its residents. These comparisons show that younger U.S. residents have lower levels of education than their counterparts in a number of other advanced

Chart 2-1 **Educational Attainment by Age, 1947–2004**
Schooling levels are no longer rising as quickly as in the 1950s and 1960s among people aged 25–29.



Source: Department of Commerce (Bureau of the Census).

countries. In 2002, for example, half of young people in Canada and Japan had attained a college degree (an associate's or bachelor's degree or higher), compared with 39 percent of young people in the United States.

Many students exit college without obtaining a bachelor's degree. In 2004, about one-quarter of adults had attended a post-secondary institution but had not completed a bachelor's degree. People who complete some college without obtaining a bachelor's degree are a diverse group. Some attain an academic or vocational associate's degree or certificate, while others drop out of college without completing a single semester. Some attend a four-year college, while others go to two-year community colleges. Among those with some college but no bachelor's degree, many began college immediately after completing high school, while others are older workers who return to school for additional training.

Educational Attainment by Race, Ethnicity, and Gender

Women tend to be more educated than men. Women are more likely to have completed high school or obtained a bachelor's degree or higher. In 2004, for example, about 31 percent of 25- to 29-year-old women had a bachelor's degree or higher, compared with 26 percent of their male counterparts (see Table 2-2). This is a fairly recent trend: Until 1991, men in this age group were more likely than women to have a bachelor's degree or higher.

Educational attainment differs widely by race and ethnicity. More than 90 percent of non-Hispanic white and Asian 25- to 29-year-olds have completed high school, compared with 88 percent of blacks and 62 percent of Hispanics in that age group (see Table 2-2). Racial and ethnic differences are even larger for college completion: Among 25- to 29-year-olds, about 61 percent of Asians have a bachelor's degree or higher, compared with 35 percent of non-Hispanic whites, 17 percent of blacks, and 11 percent of Hispanics.

TABLE 2-2.— *Educational Attainment by Race, Ethnicity, and Gender, 2004*

	Share with high school degree or higher	Share with bachelor's degree or higher
Total	87	29
Non-Hispanic white	93	35
Black	88	17
Hispanic	62	11
Asian	96	61
Men	85	26
Women	88	31

Note: Data refer to noninstitutionalized population aged 25–29. Since data exclude incarcerated population, they likely overstate educational attainment of U.S. residents.

Sources: Department of Commerce (Bureau of the Census).

Schooling levels differ between natives and immigrants. In 2004, for example, half of all adult Asian immigrants had completed a bachelor's degree or higher, compared with 28 percent of the overall adult U.S.-born population. Latin American immigrants tend to have lower levels of schooling while their children tend to improve upon the education attained by their parents. According to the National Center for Education Statistics, for example, about 50 percent of Latin American immigrants aged 18–24 had completed high school, while the high-school completion rate was 78 percent among their U.S.-born children of the same age.

Math, Science, and Reading Skills in the United States and Around the World

Educational attainment is an important measure of the preparedness of a nation's workforce, but it does not tell the whole story: Two people with the same level of education may have very different skill levels. Similarly, a high school diploma may not ensure that a student is competent in all areas. The fact that growth in schooling has slowed in the United States might be less worrisome if it were balanced by an improvement among the U.S. population in other measures of skills.

One way in which the United States monitors the academic preparedness and skills of its students is through standardized tests of math, science, and reading. The United States participates in several national and international tests for elementary and high school students. These tests shed light on how the math, science, and reading skills of U.S. students compare to those of students in other countries.

Table 2-3 ranks advanced countries by students' scores on math and science tests at different ages. The countries are ranked by average score, with the highest scorers at the top. Not all countries participate in every test. So that the country rankings can be compared at different ages, only countries that participated in at least half of the tests are included in the table.

As the table shows, older U.S. students do worse relative to other advanced countries than younger U.S. students do. At ages 9 and 13, the United States generally places above the middle of the rankings on math and science tests. By age 15, however, U.S. students are outperformed by most of their international peers. Among students in their last year of secondary school, U.S. students are at or near the bottom of the rankings. Country rankings from international tests in reading, not shown in Table 2-3, are only available at ages 9 and 15. In rankings of advanced countries similar to those shown in Table 2-3 for math and science, U.S. students score above the middle of the rankings in reading at age 9 but fall below the middle by age 15.

TABLE 2-3.— *Rankings of Selected Advanced Countries by Average Score on International Tests*

Age 9		Age 13		Age 15		Last year of secondary school	
Math	Science	Math	Science	Math	Science	Math	Science
Hong Kong	Japan	Hong Kong	Hong Kong	Hong Kong	Japan	Netherlands	Sweden
Japan	Hong Kong	Japan	Japan	Netherlands	Hong Kong	Sweden	Netherlands
Netherlands	**USA**	Netherlands	Netherlands	Japan	Australia	Norway	Norway
USA	Netherlands	Australia	**USA**	Canada	Netherlands	France	Canada
Italy	Australia	**USA**	Australia	Australia	New Zealand	New Zealand	New Zealand
Australia	New Zealand	Sweden	Sweden	New Zealand	Canada	Australia	Australia
New Zealand	Italy	New Zealand	New Zealand	France	France	Canada	Germany
Norway	Norway	Italy	Norway	Sweden	Sweden	Germany	France
		Norway	Italy	Germany	Germany	Italy	**USA**
				Norway	**USA**	**USA**	Italy
				USA	Italy		
				Italy	Norway		

Note: The last year of secondary school is 12th grade in the United States but varies in other countries. In countries that track students, students in all tracks were tested in their last year of secondary school; the last year may differ within countries for students on different tracks. Students who dropped out of school before the last year of secondary school were not tested. Data are for 2003 except for last year of secondary school (1995).

Source: Department of Education (National Center for Education Statistics).

The United States has also conducted tests of its 9-, 13-, and 17-year-olds in math and reading going back to the early 1970s. These test results show that elementary school student scores have improved since the early 1970s, especially in math, but the math and reading scores of 17-year-olds are essentially unchanged. This discrepancy means that the United States has failed to translate test-score gains among younger students into higher scores among older students. There is little consensus as to why test scores have not improved more among older students, but understanding the mechanisms would be an important step in raising their educational achievement.

School Accountability and No Child Left Behind

In recent years, as a result of state initiatives and the No Child Left Behind Act, states have implemented plans to enhance school accountability, with the aim of improving student achievement. Under these "strict accountability" plans, schools can be sanctioned (such as through loss of funding or mandatory restructuring) if their students do not meet performance standards. In order for school accountability to work, student achievement must be measured in a quantifiable way that is comparable across students and schools. This measurement is normally done through standardized tests, which are used to quantify school quality in order to identify low-performing schools. These tests allow parents to make meaningful comparisons between schools and make informed decisions about the schools in which to enroll their children.

Rigorous research into the effects of school accountability on student performance is limited, but the results are promising. For instance, a 2004 study found that states implementing school accountability during the 1990s experienced greater increases in students' test scores afterward than states without accountability. This study further found that only strict school accountability led to higher student achievement.

In January 2002, the President signed into law the No Child Left Behind (NCLB) Act, with the purpose of improving the performance of U.S. students. NCLB aims to make schools more accountable for the performance of their students. Under NCLB, each state sets standards for what students in grades 3–8 should know in math and reading. (Science assessments will be added by the 2007–2008 school year.) States must measure students' progress toward those standards through standardized tests. Schools must meet not only an overall annual performance goal but also specific performance goals for subgroups of students, such as racial, ethnic, and income groups. Schools that do not eventually meet performance goals must allow students to transfer to another public school, including charter schools, within the school district and must offer supplemental educational services to students attending schools in need of improvement.

NCLB accountability based on test scores mostly applies to grades 3–8. Testing is now required only once in high school. The President has proposed expanding accountability in high schools by requiring assessments in reading and math for students in grades 9, 10, and 11. Expansion of testing in high schools could help our high school students improve their performance relative to their counterparts in other nations.

Immigrants in the U.S. Workforce

Legal immigrants are a critical part of the U.S. workforce. Although both low- and high-skilled immigrants contribute to the U.S. economy, this chapter focuses on high-skilled immigrants. Chapter 4 of the 2005 *Economic Report of the President* covered immigration in greater depth, with a particular focus on illegal immigrants, who tend to be low-skilled, as well as the fiscal impact of immigration, immigrants and the U.S. labor market, and immigration policy and the enforcement of immigration laws.

Immigrants living in the United States can be divided into four groups: *naturalized American citizens*, immigrants who have become citizens by passing a citizenship test and fulfilling other requirements; *permanent residents*, immigrants who have "green cards" and the legal right to reside permanently in the United States but have not become naturalized citizens; *temporary residents,* people admitted to the United States temporarily for a

specific purpose, including visitors, students, and temporary workers (referred to as *nonimmigrants* by immigration authorities); and illegal immigrants, people residing in the United States illegally. This chapter uses the terms *immigrant* and *foreign-born* according to the Census Bureau's definition: Any person who is in the United States who was not a U.S. citizen at birth, that is, was not born in the United States or of U.S. parents.

Immigrants are prevalent in every education group but are particularly represented among the least-educated workers (those with less than a high school degree) and among the most-educated workers (those with a doctoral or professional degree). As U.S. workers have become more educated and increasingly work in jobs requiring higher education levels, many low-skilled jobs continue to be filled by immigrants. At the same time, high-skilled immigrant workers are a significant part of the skilled U.S. workforce, especially in the science and engineering fields. Many of the nation's university and private research laboratories rely heavily on immigrant graduate students, post-doctoral students, and researchers.

Immigrants in Science and Engineering

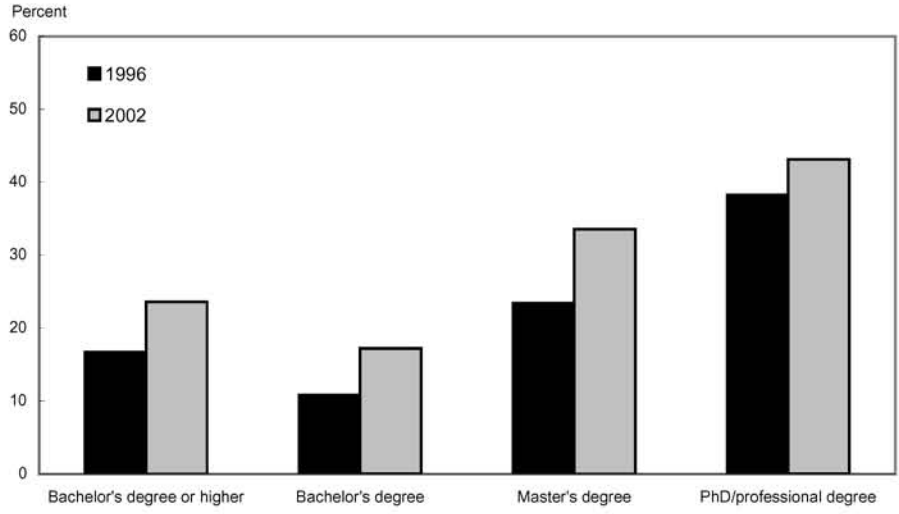
Innovation is crucial to U.S. economic growth and competitiveness, and the United States is a leading innovator. Innovation depends, in part, on scientific research, which in turn requires smart, creative people proficient in science and technology. One way in which the United States is able to maintain its position as a leader in innovation is by attracting the best and the brightest from around the world. Policies that welcome the world's "best and brightest" can contribute to future U.S. competitiveness. More than one-fifth of America's scientists and engineers come from abroad.

Chart 2-2 shows the share of immigrants among scientists and engineers aged 25–44 by education in 1996 and 2002. Immigrants tend to come to the United States as young adults, not as older workers. As the younger, more-recent immigrants age, they should make up a larger share of older workers as well. Thus, restricting Chart 2-2 to workers aged 25–44 provides a glimpse at the future of the U.S. scientific workforce.

Immigrants make up an increasing share of the scientific workforce (see Chart 2-2). In 2002, immigrants made up about 24 percent of scientists and engineers aged 25–44, an increase from 17 percent in 1996. The higher the education level, the larger the share of immigrants: Among scientists and engineers with only a bachelor's degree, 17 percent were immigrants (up from 11 percent in 1996), while among those with doctoral or professional degrees, 43 percent were foreign-born (up from 38 percent in 1996). Immigrants are especially prevalent in the fields of engineering and math/computer science and in the physical/biological sciences. Among those aged 25–44 with professional or doctoral degrees and working in these fields, immigrants made up about half of workers.

Chart 2-2 **Foreign-born Share of Employment by Education among Scientists and Engineers, 1996–2002**

Immigrants are over-represented among scientists and engineers.



Note: Data refer to people aged 25–44 and exclude post-secondary teachers. The ending year for this chart is 2002 because occupational definitions were changed after 2002; the post-2002 occupational categories are not comparable to earlier data.

Source: Department of Labor (Bureau of Labor Statistics).

International Science and Engineering Students

The United States is a top destination for science and engineering students from around the world. In 2003, almost 150,000 students from abroad were enrolled in science and engineering graduate programs at U.S. universities. Nonetheless, new enrollment of such students has been falling. Between 2001 and 2003 (the latest year available), first-time international graduate student enrollment in U.S. science and engineering programs declined by 13 percent. This decline may be the result of increased training opportunities in other countries and visa restrictions for foreign students and scholars put in place in the United States following the September 11, 2001, terrorist attacks.

After completing their studies in the United States, some students return to their countries of origin and others join the U.S. workforce. According to the National Science Foundation, about three-quarters of non-U.S. citizens who obtain science and engineering doctorates from U.S. universities plan to stay in the United States, at least for the short term. In order to remain and work in the United States, these students must get temporary work visas or become permanent residents. This process is described in more detail in the section below.

Regulation of Legal Immigration

The H-1B Program

Temporary work visas allow foreigners to work in the United States for a limited period of time. A commonly used temporary work visa for high-skilled foreigners is the H-1B visa. The visa lasts for three years and is renewable once, for a total stay of up to six years. U.S. employers hiring H-1B workers must attest that they will pay the H-1B workers at least as much as similarly employed U.S. workers and that the working conditions of such workers will not be harmed. In order to hire an H-1B worker, U.S. employers must also pay government fees of $1,435 to $2,185, depending on the size of the firm, plus an additional $1,000 fee for faster processing of the H-1B application. These costs help to ensure that employers are unlikely to hire H-1B workers unless suitable U.S. workers are not available.

Almost all workers with H-1B visas have at least a bachelor's degree, and half have an advanced degree. H-1B visas have been particularly important to the high-tech sector, with over half going to scientists, engineers, and people in computer-related occupations. According to one study of H-1B workers, many such workers do not come to work from abroad but are hired as they graduate from U.S. universities.

The number of high-skilled temporary workers is constrained by the caps on the H-1B program. The number of H-1B visas is capped at 65,000 annually for private companies seeking to hire high-skilled foreign workers, after having been temporarily raised to 195,000 during 2001–2003. Since May 2005, an additional 20,000 visas have been available each year for foreigners who have a U.S.-earned master's degree or higher. H-1B workers are not subject to the cap if they are employed at institutions of higher education, or at nonprofit or governmental research organizations.

Since reverting to 65,000, the H-1B cap has been reached earlier and earlier with each fiscal year. The cap for fiscal year 2004 was reached less than five months into the fiscal year. The cap for fiscal year 2005 was filled on the first day of the fiscal year, and in fiscal year 2006, the cap was reached almost two months before the year even started. That the H-1B cap has been reached so quickly suggests that it is no longer sufficient to meet U.S. demand for high-skilled workers.

Some have proposed to increase the number of high-skilled workers by replacing the current H-1B cap with a market-based cap. A market-based cap would increase or decrease with demand for H-1B workers. If the cap were reached in one year, the cap would be increased by a set percentage—say, 20 percent—the following year. If the cap were not reached in a given year, it

would fall by a similar amount the next year. In this way, the number of H-1B workers would depend on demand for such workers. Any such change would require congressional action.

Employment-Based Green Cards

A temporary visa allows a foreigner to remain in the United States for a specified period of time. To stay permanently requires becoming a permanent resident. In determining who can become a permanent resident, U.S. immigration law prioritizes family- and employment-based immigration. Under family-based immigration, new permanent residents must be sponsored by family members who are themselves U.S. citizens or permanent residents. Under employment-based immigration, most workers must be sponsored by their employer and have at least a bachelor's degree. From 2000-2004, about two-thirds of new permanent residents received their green cards through family-based immigration, about 15% through employment-based immigration, and the remainder through various other programs such as those for refugees.

Caps on employment-based green cards limit the number of high-skilled foreigners who can become permanent residents. The cap is set at 140,000 visas per year, including visas for the workers' spouses and children. Each country's nationals can make up no more than 7 percent of total immigrant visas. These caps have led to long delays for applicants, especially for workers from over-represented countries. For instance, some workers who became eligible in January 2006 for EB-2 employment-based green cards (for workers with advanced degrees or persons of exceptional ability) had applied for permanent residence five years earlier.

A variety of proposals have been advanced for permanent employment-based immigration to allow for more high-skilled workers and to reduce wait times. Any changes to the cap on the number of employment-based green cards would require legislative action. First, workers' spouses and children could be exempted from the cap, as is currently done for the H-1B program. Spouses and children make up about half of the recipients of employment-based green cards, so this change would roughly double the number of workers able to get employment-based green cards. Second, the fixed 140,000 cap could be replaced with a flexible market-based cap that would increase or decrease with demand for workers eligible for employment-based green cards. Finally, under current policy, nationals of no single country can receive more than 7 percent of green cards. This share could be raised to reduce the long delays for employment-based green cards for applicants from countries with large numbers of desirable, high-skilled workers. Careful enforcement of limits on foreign nationals' access to sensitive technology would provide continued protection for our national security.

Skilled Immigration and Innovation

Legal skilled immigrants play an important role in the U.S. economy. They add to the process of scientific discovery, technology development, and innovation, which in turn lead to greater productivity growth. Greater productivity growth improves the standard of living for the U.S. population as a whole.

A recent World Bank study attempted to quantify immigrants' contributions to innovation and the generation of new ideas, as measured by the number of patents applied for or received in a given year. (Patents are a commonly used proxy in studies of innovation.) According to the study, a 10 percent increase in the number of graduate students from abroad, as a share of total graduate students, increases the number of patents granted to U.S.-based universities, firms, and other institutions by about 6–7 percent. Skilled immigrants overall have a smaller but still positive effect: a 10 percent increase in the number of skilled immigrants, as a share of the U.S. labor force, raises the number of patents granted to U.S.-based institutions by about 1 percent. The results of this study may be partly due to a higher concentration of foreign graduate students in the science and engineering fields, as compared to domestic graduate students who are found in a wide variety of fields including humanities and liberal arts.

Skilled immigrants not only contribute to the innovation process themselves, they also help train our own future innovators. The foreign-born make up about one-fifth of science and engineering faculty at U.S. universities, including more than one-third of engineering faculty. As faculty, they teach both undergraduate and graduate students, training the next generation of U.S. scientists and engineers.

U.S. immigration law, by restricting the number of high-skilled immigrants authorized to work and settle in the United States, limits how many foreigners can contribute to the innovation process. Increasing the caps on the H-1B program and on the number of employment-based green cards would allow more high-skilled immigrants into this country. By welcoming more of the best and the brightest from around the world, these changes to the caps would enhance U.S. competitiveness and result in productivity gains for both immigrants and natives, raising the standard of living for the population as a whole.

Job Training

Education and learning do not stop when someone leaves school. Workers need to continually upgrade their skills if they are to adapt to and take part in a continually changing economy. Skills originally learned as a teenager or young adult in high school or college can quickly become outdated. To

remain competitive, workers need to keep their skills relevant, and job training can be a useful way of doing that.

Job training comes in many forms. Often it occurs on the job, either through formal programs run by the employer or through informal learning. Some employers may also send their workers to post-secondary institutions to receive training. Other workers will attend such institutions on their own to keep their skills fresh for their current job, to improve their skills in order to land a better job, or to upgrade their skills after being laid off.

The Role of Community Colleges

Workers often obtain training at community colleges, generally two-year post-secondary institutions that offer certificates and associate's degrees. Community colleges play an important role in providing training to workers, both directly and through employers. Of individuals age 30 and older attending college, about half go to a community college, compared with one-third of students of traditional college age. Some employers may reimburse workers for regular courses taken at community colleges, while other employers may contract with community colleges to offer courses tailored to the employers' needs. Workers may also attend community colleges on their own, especially after a job loss. According to one recent study, about 15–20 percent of long-tenured, laid-off workers complete at least one community college course around the time of their job loss.

Given that so much job training and retraining occur at community colleges, it is important to know whether or not community colleges actually help workers raise their earnings. Recent studies have found that community colleges do contribute to workers' earnings. A year of community college raises real annual earnings by around 6 percent. Community college also helps laid-off workers. According to one study, in the long term, a year of community college raises the earnings of long-tenured, laid-off workers by about 7 percent for men and even more for women, compared to similar workers who do not enroll in community college classes. The earnings gains are higher for workers who take technical, scientific, or health-related courses, and lower for workers who take less quantitative courses.

One of the major sources of financing for community college students is the Pell Grant program, a Federal government program that helps low-income students attend college. In 2005, the Federal government spent about $7 billion on Pell Grants for students in community colleges. In addition, in 2005, in order to help community colleges provide worker training, the President proposed and Congress approved the creation of Community-based Job Training Grants. The program has continued in 2006 with $124 million in funding.

Job Training Funding

In 2005, the Federal government spent nearly $15 billion (excluding Pell Grants) on job training and employment programs. These programs assist many workers in getting the training and other services they need to advance their careers. However, these programs can be strengthened. The $15 billion in job training money is spread among 9 different government agencies and more than 40 different programs, most with their own rules, eligibility requirements, administrative staff, and overhead costs. Much of this money is not used to support job training programs but instead funds job referral services or job search assistance.

To get more job training dollars into the hands of workers, eliminate unnecessary duplication of services, and improve accountability, the President has proposed consolidating several large job training and employment programs into a single grant that would be used to provide job training vouchers. These vouchers, known as Career Advancement Accounts, would be administered by each state but controlled largely by the worker, who could use the account to pay for education and training. The education and training could take place either at post-secondary institutions or through apprenticeships or other work-based training. These accounts would complement, but not duplicate, Pell Grant resources available to help workers further their career education. States would be required to achieve Federal accountability standards for job placement, employment retention, and earnings. By reducing administrative costs and redirecting more money into job training programs, the Career Advancement Accounts proposal would increase the number of workers who receive the job training they need to upgrade their skills and improve their employment prospects. Career Advancement Accounts would also allow workers the flexibility to choose the training that best suits their needs. They would not tie workers to any particular training provider or location, thus providing workers with maximum flexibility.

Conclusion

Historically, high levels of education and skills in the United States have boosted earnings for individual workers and fueled one of the most dynamic, innovative economies in the world. In recent years, though, educational attainment among young people has, by some measures, leveled off. The rapid growth in schooling in the 1950s and 1960s, and the higher levels of education attained by the younger residents in some of our international competitors, prove that the United States can do better. Promoting a flexible

and skilled labor force—through improved access to high-quality primary, secondary, and post-secondary education, through policies that attract the world's best and brightest to our shores, and through investment in the continuing education and training of our workforce—will ensure that the United States remains a competitive leader in this rapidly changing world economy.