CHAPTER 7

Investing in Education and Training

THE FEDERAL GOVERNMENT HAS BEEN a vital partner in education for more than 200 years. Even before the Constitution was adopted, the Ordinance of 1785 set aside a section in every township in the new territories west of Pennsylvania to support a school. In 1862 the first Morrill Act authorized Federal land grants to States for the establishment of colleges. As World War II came to an end, a grateful Nation offered the G.I. bill, which eventually served nearly 8 million returning veterans—and fundamentally changed the educational landscape of the country. Today, Federal educational loans and grants open the doors to college for millions of students who could not otherwise attend, and Federal grants to low-income schools help more than 6 million children learn to read and to do math.

Learning is a lifelong process, not limited to those between the ages of 5 and 25. From early childhood education to college to training for the unemployed, this Administration has sought to complement the efforts of State and local governments in responding to the new demands of the labor market. The Nation is in the midst of an educational renewal, and families, teachers, local school districts, colleges, States, employers, and the Federal Government all have a role to play in the transformation.

The renewed Federal interest in education and training is in part a response to the two challenges outlined in Chapter 1: the slowdown in the growth of productivity and the increase in earnings inequality. Education and training policy is one of the few policy levers available to address both problems simultaneously.

One of the most dramatic changes in our economy during the past 15 years has been the increased economic payoff to skills, as reflected in the increased inequality in earnings between high school and college graduates. In 1979 full-time male workers aged 25 and over with at least a bachelor's degree earned on average 49 percent more per year than did comparable workers with only a high school degree. By 1993 the difference in wages had nearly doubled, to 89 percent. To the extent that this rise in the payoff to education reflects an increase in the value of skill, improving our schools and expanding access to postsecondary training stimulate economic growth. Based on estimates from the Bureau of Labor Statistics, the rise in the average educational attainment of the

workforce accounted for one-fifth of the annual growth in productivity between 1963 and 1992. International evidence reveals that, all else equal, those nations with the highest school enrollment rates in the early 1960s tended to enjoy the most robust growth in subsequent decades.

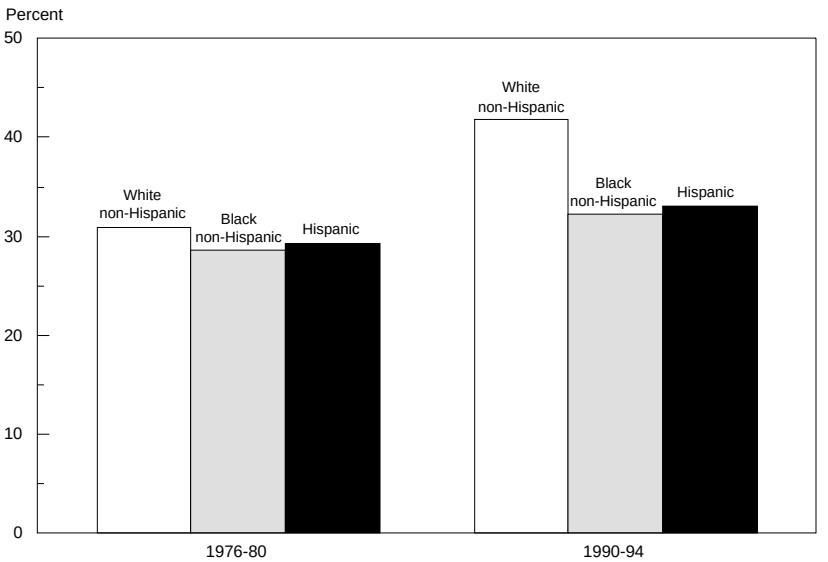
Education and training policies can also help address the problem of growing inequality. A primary goal of Federal policy must be to ensure that educational opportunities are not restricted to those whose parents can finance an education out of their own pockets. Federal programs such as Head Start, which helps low-income children prepare for school; Title I of the Elementary and Secondary Education Act, which provides supplemental Federal assistance to low-income schools and school districts; and Federal financial aid for college students are all designed to support those who would otherwise not have an equal opportunity to invest in learning.

The sharp rise in family income inequality should not be allowed to cause greater inequity in access to educational opportunities. The widening disparity in earnings prospects between the more and the less educated makes such efforts to equalize educational opportunities even more imperative. Since the 1980s the Nation's track record in equalizing educational opportunity has been mixed. In elementary and secondary schools, racial gaps in test scores in mathematics, reading, and science have closed somewhat, even as mean scores have risen for whites as well as blacks and Hispanics. The black-white gap in high school graduation rates has also narrowed since the mid-1970s, as high school graduation rates rose for blacks.

However, gaps in college enrollment rates between low- and high-income youth and between minority and white, non-Hispanic youth have widened since the late 1970s (Chart 7–1). Although all groups have responded to changes in the labor market by attending college at higher rates, the increases have been larger for middle- and higher income youth than for low-income youth. Because blacks and Hispanics are overrepresented at the bottom of the income distribution, the racial and ethnic enrollment gaps have widened as well.

The widening gaps in college enrollment are troubling for at least two reasons. First, they may imply an increasing perpetuation of inequity from one generation to the next—with access to higher education increasingly allocated on the basis of ability to pay, not ability to learn. In this country, which values the principle that children's success in life should not be held hostage to their parents' lack of resources, this is unacceptable. A second reason is that low enrollments deprive the economy of the skills of those unable to finance those investments. The labor market is demanding high-

Chart 7-1 **College Enrollment Rates of Young High School Graduates**
Enrollment rates have increased for white, black, and Hispanic high school graduates, but the increase in white enrollment has been larger.



Note: Data are for high school graduates age 18 to 24.
Source: Department of Education.

er levels of skill, and the economy will grow more quickly if we succeed in producing more skilled workers.

Education and training policy can contribute to reversing the growth of inequality in the country in two ways. First, by targeting educational resources more effectively, education and training policy may enable more of our citizens to benefit from the rising payoff to skill. Second, a robust supply response that creates an abundance of skilled labor and causes less-skilled labor to become relatively more scarce may slow the rise in the price of skill in the labor market, reducing the growth of wage inequality and possibly even reversing it somewhat.

In short, the Administration's education and training policies are predicated on the three principles outlined in Chapter 1. They encourage students and schools to *embrace change* by developing the skills demanded by the new labor market. They *create opportunity* by targeting resources to the disadvantaged, providing greater opportunity to participate fruitfully in that market. And they *promote personal responsibility*, by stressing to young people and workers that they are responsible for making their own educational choices, and by requiring them to share some portion of the cost: through their efforts in school, through the earnings they forgo to remain in school, through their participation in the Federal Work Study program, and through their obligation to repay educational loans.

This chapter first reviews the good news on the extent to which the Nation has responded to the rise in the value of education since the early 1980s, as well as the sobering news on how far we still have to go. The chapter then examines the evidence from the economics literature on the payoff to investments in schooling and training. Finally, we describe the Federal role in education and training policy in complementing State and local efforts.

AMERICANS ARE RESPONDING TO THE DEMAND FOR SKILLS

Americans have always placed a high value on education, seeing it as a ladder of opportunity. Therefore, the country was ready to respond when *A Nation at Risk*, the 1983 report of a commission appointed by the Secretary of Education, sounded the alarm over declining nationwide test scores. Since then a number of States and local school districts have launched ambitious reform projects. After a decade of effort, progress clearly has been made:

- Students are spending more time on homework than they did at the end of the 1970s. The proportion of 13-year-olds reporting that they had no homework or that they had not done their homework declined from 38 percent in 1980 to 25 percent in 1992.
- The proportion of 11th- and 12th-grade students taking advanced placement courses grew by 138 percent between 1984 and 1992.
- In 1992 the average public high school graduate had completed 49 percent more courses in algebra or higher mathematics, 33 percent more coursework in science, and 8 percent more coursework in English than his or her counterpart in 1982.
- Between 1980 and 1993, the proportion of students in grades 10 through 12 remaining in school rose for whites, blacks, and Hispanics. The decline in the dropout rate was particularly steep for blacks.

The hard work of students, parents, teachers, and school administrators has borne fruit in the form of higher test scores and higher college enrollment rates. Some year-to-year fluctuations notwithstanding, most of the trends suggest that progress is being made:

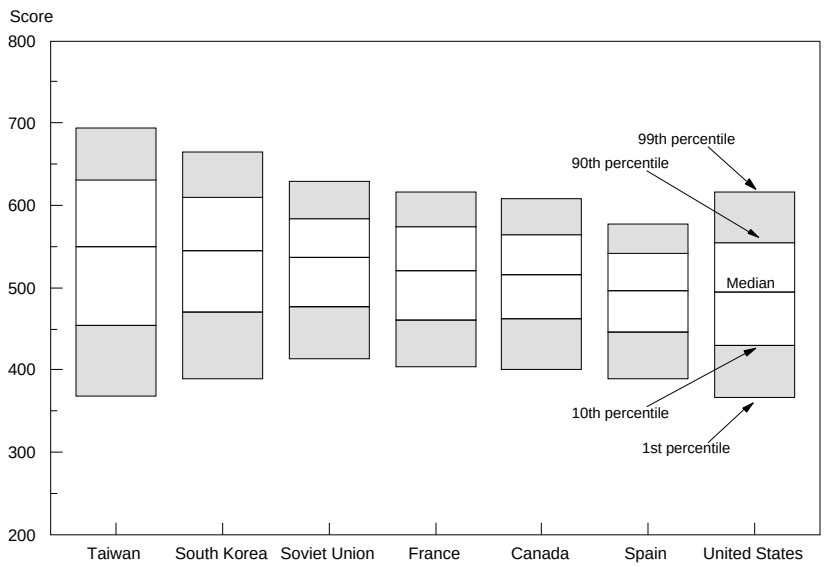
- As measured by scores on the National Assessment of Educational Progress, average mathematics proficiency rose for nearly every age, gender, and racial or ethnic group between 1978 and 1992.
- Average mathematics scores on the Scholastic Aptitude Test (SAT) rose by 13 points overall and by 28 points for blacks between 1980 and 1994. These gains are particularly impressive given the large increase in the proportion of high school stu-

dents taking the SAT, which would have tended to reduce average scores.

- The proportion of college-age youth (those 18 to 24 years old) enrolled in college grew by more than one-third between 1980 and 1994, from 26 percent to 35 percent.
- The numbers of associate, bachelor's, and doctoral degrees awarded grew by 28 percent, 25 percent, and 29 percent, respectively, between 1980 and 1993, even though the population of college-age youth declined by 15 percent.

However, much remains to be done. Although average scores have been rising in mathematics and science, much of the gain has occurred in lower level computational skills rather than in higher level problem solving. Reading and writing test scores declined slightly for the weakest students during the late 1980s. Perhaps most disturbing, students in the United States continue to lag behind their counterparts in many Asian and European countries in math and science (Chart 7–2).

Chart 7-2 **Mathematics Proficiency of U.S. and Foreign Students**
The median performance of U.S. 13-year olds in 1991 was below that of students in several other countries.



Note: Test instrument is International Assessment of Educational Progress.
Source: Department of Education.

Although it is tempting to extrapolate from current trends and to assume that the rise in skill-related earnings inequality will continue unabated, economic historians tell us that the payoff to education has fluctuated over the past 50 years, rising and falling with changes in supply and demand. For example, the ratio of the aver-

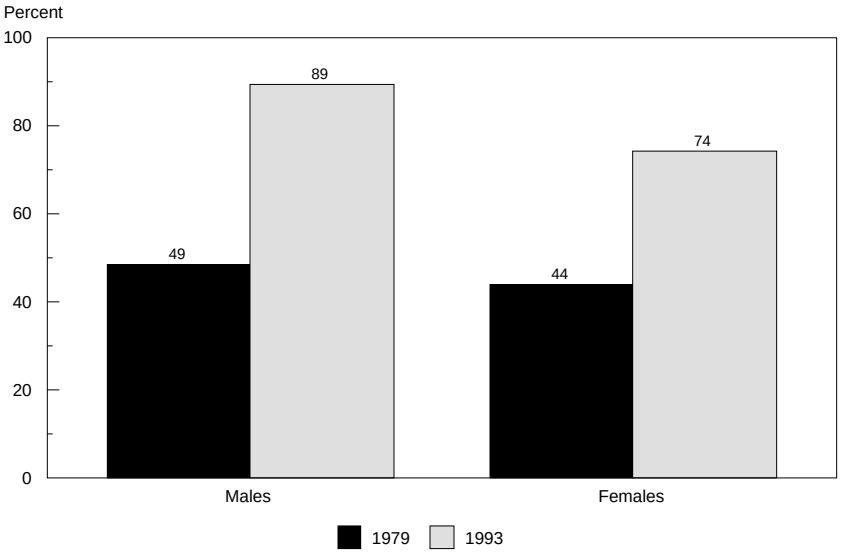
age earnings of a college graduate to the average for high school graduates is today roughly what it was in 1940. Economic theory predicts that positive shifts in demand will be met by increases in the quantity supplied. Although Americans have responded by enrolling in college in record proportions, so far the demand for skill has outpaced the Nation's ability to produce more skilled workers. But the demographic tide is gradually turning, as the number of 18- to 24-year-olds is expected to rise by 20 percent over the next 15 years. Eventually the rise in the labor market value of skill, and the wage inequality it has brought about, may be dampened if these new workers are better equipped to meet the demands of the labor market. The remainder of this chapter discusses the role of government policy in aiding that response.

DO EDUCATION AND TRAINING LEAD TO HIGHER EARNINGS?

Throughout the 1980s the gap in real annual earnings widened between American workers with different levels of education (Chart 7–3). Labor economists have argued for decades over whether education actually *causes* differences in earnings, or whether those with better earnings prospects—because of more favorable family backgrounds or greater native ability—simply consume more education. After literally hundreds of studies of the economic importance of education, most economists now agree that education does, indeed, lead to higher earnings (although they may disagree about the size of the effect). Each additional year of formal schooling is associated with a 5 to 15 percent increase in annual earnings later in life. Even without counting the other benefits offered by education—a more active citizenry, breakthroughs in science and the arts, less reliance on social welfare programs—such benefits are often large enough to justify the public and private investments involved (Box 7–1).

Questions of causation are difficult to resolve, however, because unlike natural scientists working in the controlled setting of the laboratory, researchers cannot simply assign people randomly to different educational careers. Even if one tried to perform such an experiment, those assigned to lower levels of educational attainment or training could always decide to pursue their options elsewhere. This implies that random assignment experiments can only evaluate the *incremental* impact of specific programs over that of opportunities available elsewhere—not the full value of the training. The more options available for education and training, the smaller will be the incremental impact of any specific program—even if the training itself is quite worthwhile. Therefore, in addition to using experimental evidence, economists have exploited sev-

Chart 7-3 **Percent Difference in Annual Earnings for College and High School Graduates**
Differences in mean earnings by educational attainment have widened.



Note: Data are for year-round, full-time workers, age 25 and over.
Source: Department of Labor.

eral other sources of variation in educational attainment in studying the effect of additional education and training on earnings.

COMPARING THE EARNINGS OF SIMILAR WORKERS WITH VARYING EDUCATIONAL ATTAINMENT

For decades survey researchers have collected information not just on education and earnings but on other characteristics, such as standardized test scores, parental education, and family income, which might be related to both educational attainment and future earnings. In analyzing these data, economists have attempted to control for prior differences in earnings prospects between the more and less educated, by studying the relationship between education and earnings only among those who might be expected to have similar earnings given their other characteristics.

In such studies, more than 75 percent of the estimated impact of education typically remains even after controlling for test scores prior to entering college. One recent study compared the earnings 14 years after high school of a sample of graduates of the high school class of 1972 who had attended different types of postsecondary institutions. Although those who had attended 4-year institutions had higher earnings than either community college students or those with no postsecondary training, they also had higher grades, higher standardized test scores, and more favorable family

Box 7–1.—Is a College Education a Worthwhile Investment?

Calculating the return on any investment involves assessing both costs and benefits. Here we do some back-of-the-envelope calculations of the economic return to a college education.

Although a college education certainly yields other benefits, earnings differentials after college—the additional wages that a college graduate earns compared with a high school graduate—are perhaps the easiest to measure. It remains to be seen how today's college graduates will fare over the next 45 years of their careers; absent that information, the most straightforward approach is to assume that the difference in earnings observed among people of various ages and educational attainments today will persist into the future.

A college education clearly has high costs as well. In addition to the $10,000 in average educational costs per year of college, students forgo potential earnings while in school. Since a full-time college student would typically miss 9 months of work experience in a year, three-quarters of the average annual earnings of an 18- to 24-year-old male high school graduate, or $12,200, is a reasonable estimate of earnings forgone for each year of full-time college study. Therefore the total cost of a year in college is the combination of educational costs and forgone earnings, approximately $22,200.

If these measures of costs and benefits are accurate, the internal rate of return on 4 years of college for a male, 13 percent, is higher than that for most financial instruments. Even if one attributes only 75 percent of the earnings difference between high school and college graduates to schooling, the internal rate of return is still 11 percent. Despite the high costs, then, a college education continues to be a worthwhile investment.

backgrounds upon graduating from high school—all characteristics that would have predicted higher earnings for them even if they had not attended college. Comparing those who had similar family backgrounds and academic characteristics in high school, the researchers found that a year of community college was associated with an increase in earnings of 4 to 7 percent, roughly the same as that associated with a year in a 4-year college.

STUDIES USING TWINS

Admittedly, however, many of the characteristics that affect earnings are difficult to measure. Such easily quantifiable variables as family income or years of education received by one's parents may not fully capture the myriad differences in family background.

Rather than attempt to collect information on a seemingly infinite list of characteristics, some survey researchers have gone to great lengths to follow the experience of pairs of identical twins. Because identical twins growing up in the same household share a variety of environmental and genetic factors, analyzing differences in their earnings and educational attainment eliminates the need to measure the subtle ways in which backgrounds may differ between families.

The conclusion of this research is that, even among identical twins, those with more education tend to earn more. In some studies, the difference in earnings associated with a year of education has been as great as the 5 to 15 percent earnings difference per year of education observed in the broader population. For example, a recent study of this type found that each year of education was related to a difference in earnings of between 12 and 16 percent.

NATURAL EXPERIMENTS

Just as individuals from different families may differ in ways that are not easily measured, identical twins may have different experiences growing up that would lead one twin to attend school longer and to earn more in the labor market than his or her sibling. A third approach, therefore, is to identify laws or institutional differences that may have an effect on educational attainment but are expected to have no independent effect on earnings.

Compulsory schooling laws provide one such opportunity. Many States once had regulations that allowed only those turning 6 during the current calendar year to enter first grade in the fall. In other words, 5-year-olds with their 6th birthdays falling on or before December 31 could begin classes in the fall, while those born on January 1 or later had to wait an additional year. Because compulsory schooling laws specify a minimum *age* of mandatory attendance (usually age 16 or 17) and not a minimum *grade level*, those born during the first calendar quarter reached the age at which they could drop out after having completed a year less of school than those born in the last calendar quarter. As long as the earnings of those born at different times of the year do not vary systematically for reasons unrelated to educational attainment, the interaction between compulsory schooling laws and calendar quarter of birth provides a "natural experiment" for measuring the impact of education on earnings. Researchers have found that those with birthdays in the first calendar quarter were indeed slightly more likely to drop out at lower grade levels than those born later in the year. Moreover, each year of additional education was associated with a 5 to 10 percent increase in hourly wages later in life.

The study of compulsory schooling laws is particularly important because it identifies the payoff to a year of schooling only for those

who are constrained by such laws to remain in school, rather than describing the average return to education for all who remain. Therefore, the results suggest that even those who would have dropped out earlier than compulsory schooling laws allowed seemed to benefit from additional schooling. This is a strong argument for measures to deter high school students from dropping out (Box 7–2).

RANDOM ASSIGNMENT EXPERIMENTS

Even though, as noted above, random assignment experiments can identify only the incremental impact of specific programs and not the value of training itself, some programs do indeed seem to raise the earnings of those who are assigned to them. The primary advantage of being able to randomly assign some subjects to training and others to a comparison group is that one can expect that any resulting difference in average earnings for the two groups is due to the incremental training provided and not to some other difference between the two groups. Although the studies are usually conducted on a small scale, random assignment evaluations have often found that education and training raise the earnings of participants. For instance, in recent years the Center for Employment Training (CET) in San Jose, California, has achieved impressive results in two different random assignment evaluations. Out-of-school youth receiving an average of 4.1 months of training at CET earned 40 percent more per year (approximately $3,000 per year in 1993 dollars) than the control group during the third and fourth year after being assigned. The total cost of the program per enrollee was $4,200. In a separate random assignment evaluation of a program for minority single female parents, participants earned $1,500 (again in 1993 dollars) more than the control group in the second year after training. Earnings increases remained large in the fifth year of the study, by which time those who had received training and job placement services were still earning 16 percent more than the control group.

Education and training for experienced workers yield economic benefits as well. A recent random assignment evaluation of the Job Training Partnership Act (JTPA), a Federal program providing training for economically disadvantaged clients, found that participation increased the earnings of adult male participants by 7 percent and those of adult female participants by 10 percent. These earnings gains were one and one-half times greater than the costs of producing them.

LEARNING OR SORTING?

Although labor economists would generally agree that education and training do lead to higher earnings, it is more difficult to deter-

Box 7–2.—New Opportunities for Potential Dropouts

One of the eight goals set out in the Goals 2000 Act is to raise high school graduation rates to 90 percent by the year 2000. Indeed, dropping out of high school is not a good financial decision. A male youth who finishes the last 2 years of high school will reap a net lifetime earnings increase of $99,000 (stated in present value terms at a 3 percent discount rate). Even when one considers the cost to taxpayers of 2 additional years of public secondary education ($5,600 per year), the internal rate of return for a male completing high school is 9.5 percent. Persuading young people to remain in high school seems a particularly worthwhile investment.

Between 1987 and 1989 the Department of Labor conducted a random assignment evaluation of JTPA programs for out-of-school youth. The average youth assigned to JTPA did not receive higher earnings during the 30-month evaluation than did those assigned to the control group, many of whom participated in other non-JTPA education and training programs. In other words, the availability of JTPA programs did not seem to add much to the existing array of services for out-of-school youth.

In response, the Department of Labor is exploring alternative strategies. For instance, rather than providing training to students once they drop out of school, the department is funding a replication of a promising high school dropout prevention program. The Quantum Opportunities Program (described in more detail in the 1995 *Economic Report of the President*) will be replicated with over 1,000 participants at seven sites around the country.

The Labor Department is also conducting a major evaluation of the Job Corps program, a comprehensive, residential job training program for high school dropouts. Treatment and control subjects will be followed for 5 to 6 years to determine the impact of the program on employment and other social outcomes.

The Labor Department has also experimented with "geographic targeting," saturating high poverty communities in inner cities and rural areas with job training, work opportunities, school-to-work programs, and sports and recreation activities. The aim is to reach enough young people in a neighborhood to reverse the effect of peer pressure. Although the saturation approach made random assignment difficult, a nonexperimental evaluation is yielding promising results.

mine *why* they matter. Do employers pay their highly educated workers more because of the skills they have learned, or do the more educated earn more because educational attainment provides other signals to an employer about them, such as their perseverance or level of motivation? The question is very difficult to resolve empirically, since it is difficult to measure acquired skill as distinct from educational attainment. For instance, we infer the extent of a physician's training not by directly measuring his or her medical knowledge but by observing his or her educational credentials.

It is likely that some portion of the observed payoff to schooling is due to both the "skills" and the "sorting" explanations. However, it appears that technological change has increased the value of some skills more than others. Even if sorting accounts for some portion of the value of education, higher level problem-solving skills have almost certainly increased in value with the availability of computers. Furthermore, it would be difficult to attribute the large increase in the payoff to schooling, even among those who have been in the labor market for decades, to an increase in the value of education as a signal. Greater success in producing these skills not only would raise the earnings of those benefiting, but also would contribute to economic growth. Moreover, when it comes to improving the earnings prospects of the disadvantaged, whether it is the skill learned or the credential acquired that opens the door, such investments improve the prospects of those who may lack the resources to invest in themselves and reduce the perpetuation of poverty.

THE PAYOFF TO PUBLIC INVESTMENT IN EDUCATION

Since the publication of *Equality of Educational Opportunity* (commonly known as the Coleman Report) in 1966, researchers have struggled with the question of whether increased expenditure on schools improves student performance. The debate is often quite contentious because of the large differences in expenditure per pupil between rich and poor school districts. For example, during the 1992–93 school year, New Jersey spent more than $9,400 per pupil in public elementary and secondary schools, while Alabama and Mississippi spent less than $3,900. Regional differences in the cost of living can explain only a small part of such variation. Furthermore, given the importance of local financing of public education, expenditure per pupil can differ by a factor of two or three even between districts in the same State.

Typically, analysts compare average test scores in high-spending and low-spending districts to learn about the effect of additional resources on scores. Not surprisingly, the high-spending districts

have higher average scores. However, since high-spending districts also tend to have higher average family income and parental education, the differences in student performance may be caused not by differences in the level of spending but by differences in family resources. When analysts compare test scores in high- and low-spending districts with similar family incomes and parental education, the results are often considered provocative: districts that spend more are often found *not* to have higher test scores.

However, additional resources could have other beneficial impacts. The standardized tests used in much of the research may not reliably measure the kinds of improvements that parents or policymakers would expect schools to produce with additional resources. The benefits of new courses in American history, geometry, or calculus or improved learning opportunities for the disabled—valuable as they may be—would not be captured by such measures.

Consistent with this hypothesis, studies of the long-term impacts of school expenditure on earnings and educational attainment—in contrast to those that focus on test scores—yield more optimistic evidence that public investment in elementary and secondary schooling does generate benefits later in students' lives. For instance, better paid and better educated teachers and smaller classroom size have been associated with greater educational attainment and higher payoffs to education later in life, even if they have not had large effects on the particular test scores used. One recent study concluded that the payoff was not only positive but financially lucrative: a 10 percent increase in expenditures from kindergarten through 12th grade would produce additional lifetime earnings valued at 1.2 times the additional cost (in present value terms). Admittedly, studies of this kind remain few, and some authors have reported less positive results, but some evidence suggests that past increases in spending on education did bear fruit, even if the results did not register on the particular tests used.

But the debate over such findings often misses a more relevant question: rather than continue to debate how much of a difference additional resources have made in the past, we should be asking how programs and incentives could be structured today to ensure even greater benefits from resources invested now and in the future. It is difficult to believe that a knowledgeable school principal could not find a way to use additional resources to improve student learning, as long as the incentives in the environment rewarded such gains. The task of policymakers should be to create an environment in which incentives dictate that resources be invested profitably.

On this question, Federal, State, and local governments are already a step ahead of the academic debate. Many of the educational reforms being pursued today seek to produce more decen-

tralization and greater accountability, both of which are designed to create an environment in which resources are used more efficiently. The charter school movement is a good example. Minnesota was the first State to pass a law allowing for charter schools in 1991. Since then 19 other States have enacted laws permitting the development of charter schools. A charter school is usually the brainchild of a committed group of teachers or set of parents who want the flexibility to try a different approach. Typically, they apply to the local school board or the State department of education for a charter allowing them to open a new school with public funding. Since charter schools are public schools, they do not charge tuition. Such charters typically waive many of the regulatory requirements imposed on other public schools for 3 to 5 years, at which time they are subject to review.

Charter schools enhance accountability in two ways. First, charter contracts often specify benchmarks for performance, such as scores on specific State assessments. In exchange for the freedom to innovate, charter school organizers are expected to produce results. Some contracts are more specific in spelling out such performance expectations than others. As States develop better assessment tools under the Goals 2000: Educate America Act (described below), these performance expectations can be more explicitly stated. Second, the presence of charter schools is intended to encourage innovation by nearby public and private schools, through the demonstration of successful educational strategies and through the threat of lost enrollment.

The Department of Education has helped to nurture the charter school movement by providing seed money for the establishment of charter schools. In the 1995 fiscal year, the Federal Government provided nearly $6 million in grants to help cover startup costs for charter schools. The Administration hopes to increase this commitment significantly over the next few years.

But the establishment of charter schools represents only one way in which States and local school districts are seeking to provide better incentives for schools and teachers. School report cards, performance bonuses for schools, magnet schools, and other forms of public school choice are also being tested.

Publicly funded vouchers for use at private schools are another, more radical approach. But vouchers have several problems. Their advocates fail to recognize the many ways in which education for children differs from conventional goods. The primary risk of vouchers is that they may produce a dramatic increase in social stratification. The cost in terms of the resulting damage to social mobility and social cohesion could exceed any benefit in terms of better school performance. Because they are public schools dependent upon public support, charter schools can be more carefully

planned to serve all children's interests by locating them in urban areas, by insisting on open admissions policies, by holding them directly accountable for results, and—when oversubscribed—by requiring them to establish lotteries for admission. Charter schools provide a framework for an improved educational system, with parents and teachers working together to develop new and creative solutions to the challenges they face, and demanding accountability of all participants in the educational process.

Some approaches to accountability are better suited to some environments than others. For instance, school report cards are better indicators of school performance when mobility between schools is low and when one can control for differences in student characteristics. Charter schools and magnet schools provide better incentives when the quality of local transportation is good and parents are engaged and well informed. Still another approach, which several European countries employ, raises the stakes for students, through more widespread use of achievement tests as a criterion for high school graduation and college admission, or even by employers in their hiring decisions (Box 7–3). Given the diversity of circumstances around the country, it is appropriate that each State and school district pursue its own strategy for encouraging more decentralization and accountability. The next section discusses the various ways in which the Federal Government has chosen to complement these efforts.

THE FEDERAL ROLE IN EDUCATION AND TRAINING

The environment facing providers of education and training is changing. Today parents and taxpayers increasingly expect results from their investments. In partnership with State and local policymakers, Federal policy is helping to create this new environment in several ways: by providing seed money to States developing content standards in core subject areas, by supporting States in the development of assessment tools for measuring progress, by helping States to invest in their teachers, and by supporting the establishment of charter schools. But in addition to these efforts the Federal Government serves many other roles in our education and training system, such as guaranteeing student loans, channeling resources to low-income schools and school districts, helping disadvantaged children prepare to enter kindergarten, and helping States develop new pathways from school to the world of work. As mentioned at the outset of this chapter, the Federal Government has played a vital role in education since before the Constitution was signed. There are at least five reasons why.

Box 7–3.—Raising the Stakes for Students

Despite recent gains, American youth continue to perform poorly in science and mathematics relative to their counterparts in many other industrialized countries. American students also seem to spend less time on their studies than students in other countries. The Organization for Economic Cooperation and Development has suggested that one of the causes of the poorer U.S. performance is the lack of connection between high school achievement and employment or schooling opportunities.

Unless they are planning to attend a selective college, high school students in America often have little incentive to do well academically. Surveys suggest that employers have difficulty collecting and interpreting transcripts from many different schools. And except for the most competitive colleges, a student's performance in high school has little impact on his or her chances of admission to college. The skills developed in school may well matter later in students' careers, but many students may fail to see a connection between performance in school and immediate prospects for a job or college admission.

In contrast, many European countries require students graduating from high school to take tests in various subject areas. Universities use these scores in making admission decisions, as do employers in their hiring decisions. Some precedent for such high-stakes testing exists in the United States—the Regents Examination in New York is an example. By raising the stakes for high school performance—or, possibly more important, making the actual consequences more visible—these tests may induce students to work harder.

An achievement test may also strengthen the incentives of students and teachers to work together. Absent an external standard, schools judge individual students relative to their classmates. But the relative scale gives students an incentive to discourage their peers from "wrecking the curve." In contrast, an external standard unites teachers, students, and their classmates in a common objective: to perform well.

To focus attention on the value of high school achievement, the Administration has proposed providing $1,000 scholarships to the top 5 percent of every high school class, public and private, for use at college. Although the reward is still based on a relative standard, the goal of the awards will be to make the new realities of the labor market more salient, giving students in school a more immediate reason to strive harder.

First, Americans are a mobile people. Between 1993 and 1994 alone, 6.7 million Americans moved from one State to another. The consequences of a good—or a bad—educational system therefore extend well beyond the borders of a single State. For this reason, education is a national concern as well as a local one.

One consequence of that mobility is that the Federal Government has a distinct advantage in administering educational loan programs. The average cost of a year at a public 4-year college is approximately $10,000, not counting room and board, earnings forgone while attending school, college expenditures on sponsored research, or scholarships and fellowships. Even though States often pay a large share of these costs through subsidies to public institutions, relatively few families have the resources to finance such large investments out of pocket. Moreover, because an education cannot be repossessed like a car or a house, private lenders have not been willing, absent government guarantees, to lend at reasonable rates, even to the most promising student. Given the mobility of the population, the Federal Government is in the best position to guarantee these loans and to pool the risk associated with them.

Second, the Federal Government must share the responsibility of guaranteeing equality of opportunity for all children. The commitment to equal opportunity is founded upon both moral imperatives and economic interests. The commitment to opportunity for all children has long been a fundamental American value. The economic interest is also clear. Without intervention by higher levels of government, many communities would not be able to invest to the full extent worthwhile in their children's educations. Although many State governments do target resources on the most disadvantaged schools and school districts, as argued in Chapter 4, Federal involvement may be necessary to avert a "race to the bottom" in the provision of State services to the disadvantaged. And even if there were no race to the bottom, differences in resources would mean children in disadvantaged communities or poor States might receive an inadequate education. The Federal Government can help to equalize access to educational opportunities across States and school systems.

Indeed, some progress has been made over the past decades. As already mentioned, black youth have closed part of the gap in test scores with their white classmates in elementary and secondary school. Nevertheless, students continue to come out of our school system with enormous disparities in basic skills. One recent study has suggested that differences in basic skills among youth emerging from our school system may account for a significant share of the difference in average earnings between black and white males in their late 20s.

Third, the Federal Government must play a role in research and evaluation and in informing local decisionmakers about the payoffs to alternative strategies. This is true of research and innovation in education no less than in other areas. How much does classroom size matter? Which teaching techniques produce better student performance? Which training programs best meet workers' and employers' needs? To deploy a school's resources wisely, teachers and administrators must know which strategies work best for which youth. The answers to these questions are public goods, of value to educators everywhere. Although some school districts have conducted evaluations of their own, no individual school or school district has a sufficient incentive to invest, to the full extent worthwhile, in the kind of careful, expensive random assignment evaluation necessary to resolve critical issues. The Federal Government—through the Departments of Education and Labor, in particular—has an important role in promoting, analyzing, and disseminating this knowledge.

Fourth, the Federal Government has a critical role to play in encouraging States to set content standards in education and to develop testing methods that are consistent with those standards. Just as industries have found it essential to set national standards to support a national market for their goods, so it is with education: the national labor market is more effective and efficient when employers in California know that a job applicant graduating from school in New York was held to a reasonably stringent set of standards. The recently enacted Goals 2000: Educate America Act provides seed money to States to develop standards and assessments.

Fifth, the Federal Government has a particularly important role to play as a catalyst in developing a national response whenever change occurs as suddenly as it has in the labor market over the last 15 years. It performed this role admirably in the post-Sputnik era, leading reforms in the math and science curricula of our Nation's schools. It is playing that role today in a number of areas. For instance, the School-to-Work Opportunities Act allows the Departments of Education and Labor to jointly offer relatively small, short-term grants to States to begin developing pathways to careers for high school students. Although the Federal funding is short-term, scheduled to be phased out by 2001, the presumption is that thereafter States and local governments will continue to finance the experiments that worked and drop those that did not. Similarly, in response to an evolving labor market in which some workers find themselves in need of retooling, the Administration has been working to transform the unemployment system into a reemployment system. A third example is the Federal Government's encouragement of charter schools. In these and other areas the

Federal Government acts as a catalyst, providing startup funds to encourage States to think in new ways about the problems presented by a changing world.

Federal efforts—in particular, research and evaluation and the encouragement of standards and assessments—complement States' systemic reform efforts. With the knowledge gained from rigorous experimental evaluations of alternative educational interventions, school principals will make better decisions. With well-defined standards and assessments, parents and local school administrators will have better information to back their demands for accountability from the schools. Teachers, too, will have a clearer idea about where to invest in their own training and classroom preparation, so that they can effectively teach the material defined in content standards at the State and local level.

ONGOING EFFORTS IN EDUCATION AND TRAINING

State and local governments have traditionally borne most of the burden of financing elementary and secondary education. As recently as 1920, the Federal Government provided only 0.3 percent of nationwide funding for public education from kindergarten through 12th grade. (Currently, 9 out of 10 youth attend public elementary and secondary schools.) With the advent of the Great Society programs of the 1960s and the growth in Federal aid to low-income school districts, the Federal share rose, reaching a peak of 10 percent in 1980. That share has generally declined over the past decade and a half, however. In 1992–93 the Federal Government provided only 7 percent of total funding for public elementary and secondary education, with State and local governments roughly splitting the remaining 93 percent.

The Federal Government has traditionally played a larger role in higher education than in elementary and secondary education. In 1993 Federal spending accounted for approximately 25 percent of the revenues of all American institutions of higher education. (Of that 25 percent, 9 percent went to provide student grants and loans, 12 percent was for sponsored research, and the remaining 4 percent for direct appropriations and unrestricted grants.) In part, the greater Federal role in higher education may reflect the fact that highly educated people are more likely to move across State lines. In 1990, 49 percent of 25- to 34-year-olds with a bachelor's degree, but only 33 percent of those with less education, lived outside their State of birth.

EARLY CHILDHOOD EDUCATION

The Head Start program, begun in 1965, provides educational, nutritional, and health services to children up to the age of 5; 90 percent of program beneficiaries must be from families with incomes below the poverty level. The program has enjoyed bipartisan support, as reflected in the fact that funding for Head Start more than doubled between 1989 and 1995. In the 1995 fiscal year, the Head Start program cost $3.5 billion and provided funds to approximately 2,000 programs and 750,000 children. In addition to increased funding, the Administration has sought to improve program quality by increasing the number of expanded day slots for children from families with working parents and by seeking to improve the quality of program staff.

Evaluations of Head Start have reported short-term gains in IQ among children enrolled in the program; enrollees are also less likely in their later school careers to repeat grades or be assigned to special education classes. The long-term impacts of Head Start are more difficult to assess, given the long lag between investments and results. One recent evaluation reported sustained improvements in cognitive test scores for white participants, whereas initial favorable impacts seemed to diminish for black youth. Early benefits may wither if they are not nurtured in elementary school. Evaluations of Head Start have also pointed to its significant improvement in the delivery of preventive health services to children from low-income families, as reflected in measures such as immunization rates.

Despite recent additional investments in Head Start, children from high-income families remain much more likely to start school having had the benefit of early childhood education. In 1993 only 33 percent of children from the poorest 20 percent of families were enrolled in preschool or kindergarten, compared with 59 percent of children with family incomes in the top quintile. Because Head Start still serves fewer than 40 percent of eligible families, the Administration has proposed its continued expansion. If we are to reach the goal of equal access to high-quality early childhood education, the Head Start program deserves continued and expanded bipartisan support.

ELEMENTARY AND SECONDARY EDUCATION

To sustain the gains achieved in early childhood programs, elementary and secondary schools must provide challenging and engaging curricula that set high expectations for all their students. Three major initiatives over the past 2 years—the Goals 2000: Educate America Act, the reauthorization of the Elementary and Secondary Education Act, and the School-to-Work Opportunities Act—

were designed to complement and support the reform efforts of State and local school officials.

The Goals 2000: Educate America Act

The Goals 2000: Educate America Act, passed by the Congress in 1994, is the centerpiece of the Administration's effort to support State and local school reform to raise standards of achievement. Its purpose is twofold: to provide grants to States to set rigorous standards for academic achievement, and to support local grassroots efforts to ensure that all students meet those standards. In the first round of grants every State but two applied for funding to support statewide systemic reform efforts as well as promising local initiatives. In the first year of the program, total funding for State grants was $90 million. States were required to distribute 60 percent of these grants directly to school districts, to support innovative programs to improve student achievement in core subjects. The remaining 40 percent could be used for statewide planning, such as the development of academic standards and better statewide assessment tools. In the second year of the program, 33 States have so far received grants totaling $274 million, of which States are obligated to pass 90 percent along to school districts.

As argued above, educational investments are most likely to pay off when the objectives are clear and when some measure exists for tracking the progress of students and schools. Accordingly, States applying for funding under the second year of the program must develop or adopt challenging content and performance standards and a means of assessing whether the standards were met. States must also outline their plans for helping teachers develop their abilities to teach to the challenging standards. States, school districts, and schools are given a great deal of flexibility in their planning to achieve these goals. Indeed, the act expressly proscribes Federal mandates, direction or control of a school's curriculum or program of instruction or the allocation of State or local resources.

According to a survey by the Council of Chief State School Officers in May 1995, 47 States were working on more rigorous content standards and means of assessment. In Vermont, for example, the assessments encompass a broader range of student achievement than do standardized tests. The mathematics standards are typically the furthest along, drawing on the efforts of the National Council of Teachers of Mathematics during the mid-1980s. Perhaps it is no coincidence that mathematics test scores have shown the greatest gains since 1980.

In addition to providing grants for systemic reform, the Goals 2000: Educate America Act codified into law eight national goals, for improving high school graduation rates, student achievement and citizenship, math and science performance, adult literacy, teacher education, school safety, school readiness, and parental

participation. The act also provided funding for the National Education Goals Panel, to monitor the Nation's progress toward meeting those goals. The panel, an autonomous body established in 1990, is charged with publishing regular progress reports and with making suggestions to Federal, State, and local governments that will further the achievement of those goals.

The Improving America's Schools Act

Whereas the Goals 2000: Educate America Act intends to provide momentum and direction to State education reform efforts, the Improving America's Schools Act (IASA) seeks to better coordinate Federal aid with those State reform efforts. The most important part of this act was its reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965. The most significant budgetary change was the overhaul of Title I (formerly Chapter 1) of the ESEA, which provides grants to States and local school districts for the education of disadvantaged students. The program, for which $6.7 billion was appropriated in 1995, was improved in five important ways.

First, the act allows more schools with high proportions of students from poor families to use their Title I grants for schoolwide reform programs. Until the IASA was enacted, only schools in which more than 75 percent of children came from poor families had been allowed to use the money for schoolwide programs. The IASA lowered the threshold further: eventually it will allow schools with more than 50 percent poor children to use Title I grants for schoolwide reforms. This corrects a longstanding problem that prevented some students and teachers even in high-poverty schools from using equipment purchased with Chapter 1 funds.

Second, States and local educational authorities are required to monitor the progress of students in Title I programs using the same standards and assessments used for other students. State and local educational authorities are given greater authority to intervene in schools that fail to show progress. Both measures should allow local administrators to better coordinate Title I programs with State and local reform efforts.

Third, the IASA eliminated the perverse penalty imposed on low-income schools that succeeded in raising test scores. Prior to the IASA, while poverty rates determined school eligibility, resources were distributed among individual schools according to the performance of their students. Low-income schools that raised their performance could actually lose funds. Thirteen percent of principals in a survey of elementary schools reported that their Chapter 1 (now Title I) program had lost some funding as a result of improved performance. Under the reauthorization, disbursement within local educational authorities depends only upon the number

and percentage of poor children, not on their academic performance.

Fourth, school districts are required to involve parents and communities in the education of their children, and to use 1 percent of their Title I money for such programs. Research consistently finds that close parent and teacher collaboration is needed to help students learn.

Fifth, Title I establishes two new, better targeted formulas for disbursing money to poor districts and schools. As part of its 1996 budget, the Administration proposed distributing an additional $1 billion through the more targeted of the two new formulas, combining $700 million that was to have been distributed under the old formula with $300 million in new money.

The IASA includes other legislation intended to improve teaching and learning. For instance, the Eisenhower grants (Title II of the ESEA) are designed to support the efforts of schools and communities to develop high-quality teacher training in all core subject areas, with particular emphasis on math and science. The Safe and Drug-Free Schools Act (Title IV of the ESEA) provides funds to States and communities to support prevention of drug abuse and violence in their schools. In combination with the Goals 2000: Educate America Act, the IASA for the first time also grants the Secretary of Education waiver authority to give States and local schools more flexibility in implementing their reforms.

Promoting Uses of Technology in Education

The Administration has supported the creative use of technology in schools. The Technology Learning Challenge, funded under Title III of the ESEA, provides challenge grants to partnerships of schools, colleges, and the private sector for the development and demonstration of educational technology. In 1995 the initial challenge grant competition for elementary and secondary education attracted over 500 proposals and resulted in 19 grants totaling $10 million. The challenge grants have been matched by $70 million in private sector contributions in the first year. For example, the Capital School District in Dover, Delaware, received a challenge grant to bring educational curricula and communication links into students' and teachers' homes. Using a device connected to their telephone or cable lines, students use their family television sets to communicate with their teachers and classmates, and so replace passive television watching with learning time. The project, intended eventually to reach all 16 of Delaware's school districts, also receives considerable support from the State government and private sources.

During 1995 the President and the Vice President appealed to a group of firms to bring Internet access to schools in California. The goal of the privately funded effort is to establish Internet access to

all elementary and secondary schools and set up local area networks within 20 percent of them by the end of this school year. Before this effort, California ranked near the bottom in the ratio of students to computers available in schools, even though it is home to much of the computer industry.

The Star Schools program provided $25 million in matching grants in fiscal 1995 for projects using telecommunications technology in distance learning. For instance, a Star Schools grant supported the development of software to allow teachers from around the country to contribute and draw from a data bank of lesson plans in various topic areas such as math and science.

The IASA also provided $10 million in funding in fiscal 1995 for six regional technology consortia. For instance, the South Central consortium is made up of the Kansas State Board of Education and colleges of education at Texas A&M University, University of Oklahoma, University of Missouri-Columbia, and University of Nebraska-Lincoln. The consortia are intended to provide consulting services to States and school districts interested in finding new uses for technology in their schools.

To give teachers, school administrators, and researchers around the country better access to the inventory of educational research maintained by the Educational Resources Information Center (ERIC), the Administration created the AskERIC service. Educators and researchers are able to send questions to the service by electronic mail and receive a response within 48 hours.

Although the Federal investment in each of these programs is relatively small, the lessons learned from experimenting with the uses of technology in education may eventually have much broader applications in elementary and secondary schools around the country.

The School-to-Work Initiative

Young people leaving high school often lack the skills and the social networks to make the transition to work. A successful transition means that a young person soon finds a job that puts him or her on a career ladder at the hiring firm or imparts skills that make him or her more widely employable. The experience of other countries and some of the experiments in the United States have shown that programs that help young people learn skills in the context of an actual workplace make successful transitions from school to work more likely. For instance, Germany's apprenticeship system is often given credit for the low unemployment rates for youth in that country.

The School-to-Work Opportunities Act, passed in 1994, provides States and communities with funds to assist young people in making the transition to work after secondary schooling. Through the combined efforts of the Departments of Education and Labor, the

Federal Government is to act as a catalyst, providing venture capital to States for the development and implementation of school-to-work systems. In 1994 the Federal Government gave 52 development awards—one to each State, the District of Columbia, and Puerto Rico—to assist in the initiation of these systems. Also included were eight implementation awards: funds competitively awarded to States with operating school-to-work systems. The States receiving the implementation awards in 1994 were Kentucky, Maine, Massachusetts, Michigan, New Jersey, New York, Oregon, and Wisconsin. By the end of 1995, 27 States had received school-to-work implementation grants, as had almost 90 urban and rural communities. Since the inception of the program, the Departments of Labor and Education have provided $345 million to advance the school-to-work initiative.

For example, the Socorro High School for the Health Professions in El Paso, Texas, combines a traditional college preparatory course of study with applied health occupations classes. In the first 2 years of the 4-year program, students take an introductory course in the health professions, a health occupations laboratory, enhanced mathematics, and a foreign language, in addition to standard subject matter. In the 11th grade, students spend half of each school day in clinical rotations; they undertake 12 unpaid 3-week rotations, formally observing health care providers and administrators at work. Students also visit local colleges to learn about postsecondary education in health fields. In the last year of the program students work between 15 and 20 hours per week in competitively allocated, year-long internships. Students receive performance evaluations from supervisors in these internships; those receiving positive evaluations are typically hired as part-time regular employees. The program receives guidance from the El Paso Hospital Council, a coalition of senior executives from all the major health care facilities in the city. More than three-quarters of the students in the Socorro program are from low-income bilingual families; the school receives funds from Title I of ESEA and the Job Training Partnership Act.

An apprenticeship program in rural Pickens County, South Carolina, accepts exemplary students for youth apprenticeships. The program offers high school courses at the district career center, where students learn skills from agricultural mechanics to graphic communications to welding. Even in traditional subject areas, students apply their knowledge in situations that simulate the workplace. During their senior year advanced vocational students work as apprentices for 20 hours a week, earning an average of $6 per hour at local businesses while taking classes both at their high school and at the district career center. After graduating from high school, the apprentices continue to work part-time while studying

for an associate degree at a technical college in the area. Local businesses and large corporations with local establishments have taken apprentices in the program. The Partnership for Academic and Career Education (PACE), a consortium of businesses and educators, assists with curriculum development, provides staff development opportunities, and contributes materials to area high schools. The Department of Education recognized PACE with the first Award for Technical Preparation Program Excellence in 1991.

Both these programs have some degree of employer involvement, a critical component of success. Employers can be counted upon to maintain their investments in apprenticeships and worker training only to the extent that they learn that it is in their economic interest to do so. If employers are expected to share the costs, they must be rewarded with some of the benefits. Some evidence suggests that there are indeed benefits to be shared. A recent study of small manufacturing firms in Michigan that received training grants from the State government significantly raised productivity by reducing wastage. Another survey of manufacturing firms that introduced formal training programs in 1983 suggested that these firms enjoyed faster productivity growth than other firms. How these benefits are shared will depend upon turnover rates among trained workers. The experience of those firms that have been willing to participate in the school-to-work initiative, or have invested in incumbent workers, will have an important impact on future investment in education and training by the private sector.

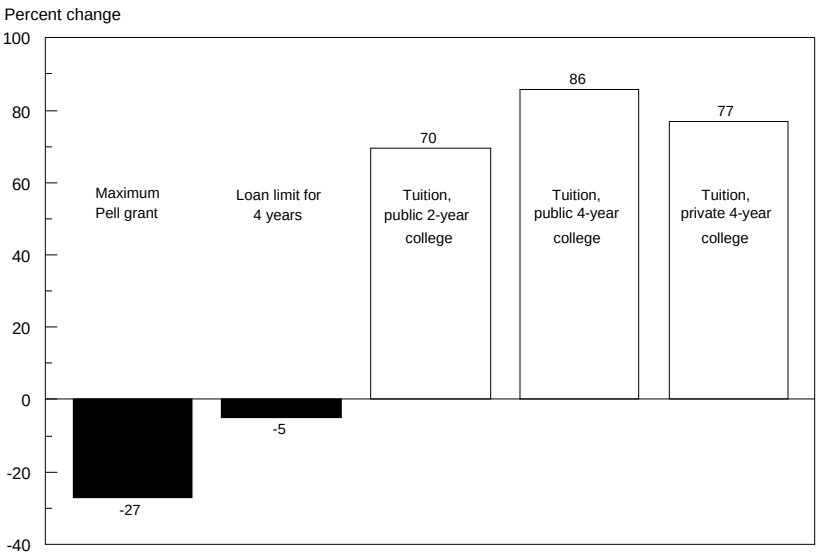
POSTSECONDARY EDUCATION AND TRAINING

As described above, many young people seem to have responded to the rising payoff to college. The proportion of 18- to 24-year-olds enrolled in college increased by one-third between 1980 and 1994. Moreover, college students are increasingly likely to earn degrees in the fields where earnings are rising the most, such as in engineering, the sciences, and the health occupations. But not all young people have reacted similarly. Although college enrollment rates have increased for most groups, differences in college enrollment rates by race and by family income have widened since 1980.

One possible cause of the widening gaps in college enrollment rates is the dramatic increase in the cost of a college education, at public as well as at private institutions. Between 1980 and 1994 the real average tuition at public 2-year and 4-year colleges rose by 70 percent and 86 percent, respectively. Over the same period, however, the value of the maximum Pell grant, the primary Federal grant program for low-income students, fell by more than 25 percent in real value. Not counting parental borrowing, the maximum amount a dependent undergraduate student could borrow over 4 years of college also declined by 5 percent in real value

(Chart 7–4). Even if one takes State and institutional need-based aid into account, the net cost at a public 4-year college for the average youth with family income in the bottom quartile rose between 1987 and 1993.

Chart 7-4 **Real Change in Maximum Pell Grant, Loan Limit, and Tuition, 1980-94**
Inflation-adjusted college tuition and fees have increased, while the maximum Pell grant and Federal student loan limit have decreased.



Note: Tuition includes tuition and required fees. The CPI-U-X1 is used to adjust all values.
Sources: Department of Education and The College Board.

The college entry decisions of young adults, particularly those from low-income families, seem to be quite sensitive to increases in tuition. A number of studies have attempted to measure this price sensitivity by comparing enrollment rates in high- and low-tuition States. These studies suggest that a $100-per-year difference in college tuition levels is associated with a 1.2 to 1.6 percent difference in college enrollment rates among 18- to 24-year-olds. Some recent evidence also suggests that those States that have raised tuition see slower rates of growth in enrollment, and that the gaps in enrollment rates between high- and low-income youth have grown most in those States that have raised tuition.

Rising costs were not the primary cause of rising tuition at public institutions. Educational expenses per full-time student (including costs of instruction, administration, student services, libraries, and operation and maintenance of physical plant, but excluding sponsored research and scholarships and fellowships) rose by only 15 percent in real terms between 1980 and 1992 at public 4-year colleges and by only 12 percent at public 2-year colleges. Rather,

public tuition rose primarily because State and local taxpayers were paying a smaller percentage of the cost than they had in the past. As enrollments have risen and as other demands on State budgets have grown, States have responded by raising tuition rather than increasing their appropriations proportionately.

Reforming Student Aid Policy

Given the forces at work, the Nation faces a number of difficult choices in the financing of higher education. In addition to a continuing increase in the demand for a college education, demographic trends indicate a 20 percent increase over the next 15 years in the population of traditional college-age youth. In some States, such as California, the demographic shift will be even more pronounced. Unless State budgets for higher education grow, public tuitions are likely to continue rising, not because costs are rising, but because State appropriations will be spread over larger enrollments. This will make a college education even less accessible for many Americans. Therefore Federal student loan and grant programs are likely to be more critically important than ever before.

To meet these new challenges, the Administration's direct lending program has sought to provide educational financing in a less costly, less cumbersome manner, with more flexible terms of repayment. The Federal Government issues loans to students through the financial aid offices of colleges, bypassing the more than 7,500 private lenders, 41 guaranty agencies, and 90 secondary market participants that make up the Federal Family Education Loan (FFEL) program.

Under the FFEL program, the Federal Government guarantees a return to banks that provide financing for student loans. Under the direct lending program, on the other hand, the Federal Government provides the capital. Whether or not direct lending saves taxpayers money depends on whether the Department of Education can service the loans for less than the subsidies it pays the private banks to carry the loans. Based on the prices it has already negotiated with private contractors to service the loans, the Administration believes that the program can deliver substantial budgetary savings. At the time the Student Loan Reform Act was passed in 1993, gradual conversion to direct lending was projected to save more than $4 billion over 5 years.

However, the debate over the cost savings generated by direct lending has overshadowed discussion of the quality of service received by students and colleges participating in the program. On this question there seems to be little disagreement, at least among the colleges and students themselves. Direct lending clearly provides more timely, more accessible service to students and universities. After the first year of direct lending, in which 104 schools participated, a survey funded by the Department of Education re-

vealed that 61 percent of participating schools reported themselves very satisfied and an additional 28 percent were satisfied. The General Accounting Office (GAO) also evaluated the program. Officials interviewed at 11 of the 17 schools examined by the GAO described themselves as greatly satisfied with direct lending, and the remaining 6 reported being generally satisfied. None of the schools reported serious misgivings. The GAO report also cited a number of ways in which direct lending helped students and universities: parents and students do not have to file separate loan applications to banks; students receive their loans more quickly; students know whom to contact for deferments or other questions, because their loans are not resold; and each college works with a single lender, the Federal Government, rather than hundreds of financial intermediaries.

More Flexible Options for Repayment

The average student borrower completing 4 years of undergraduate education today leaves school approximately $11,000 in debt. As loan burdens grow with ever-rising tuitions, flexibility in the terms of repayment can lighten the burden significantly. The direct lending program offers four different repayment options to provide such flexibility: the standard plan, the extended plan, the graduated plan, and income-contingent repayment. Private banks also can offer some choice in the form of repayment.

Under the standard repayment plan, borrowers pay fixed nominal monthly payments over a 10-year term. At an annual interest rate of 8.25 percent, a borrower with the average debt for someone finishing a bachelor's degree pays $135 per month. Under the extended repayment option the same borrower would pay $107 per month, with payments spread over 15 years.

Under both the standard and the extended plan, the nominal payment is fixed over the term of the loan, so that the real value of the payment actually declines over time. However, a declining real payment schedule may impose unnecessary hardship since young college graduates often earn significantly more after a few years on the job than they did immediately out of college. The graduated plan therefore attempts to ease their debt burden by matching payments more closely to this expected rise in earnings. For instance, a borrower with $11,000 in debt would make payments of $77 per month during the first 2 years and end with a $175 monthly payment during the 15th year.

The income-contingent option is even more flexible: monthly payments are calculated on the basis of the borrower's adjusted gross income, as reported by the borrower and verified by the Internal Revenue Service. The above graduate starting his or her career making $18,000 and enjoying annual earnings increases of 5 percent would begin by paying $90 per month and end, after 15 years,

paying $121 per month. Borrowers whose earnings are so low that they still have loan balances after 25 years of repayment will have those balances forgiven. Income-contingent student loans may thus be viewed as an innovative form of "forward-looking" means testing (Box 7–4). Although it is too early to tell, more flexible terms of repayment may also lower default rates by helping to deter borrowers from getting behind in their payments early in their careers.

Box 7–4.—Income-Contingent Student Loans as Forward-Looking Means Testing

Means testing in student aid programs "taxes" the income and assets of parents and students at a high rate by providing less aid for those with higher incomes or more assets. Because the implicit taxes apply for every year that one has a child in college, the marginal tax rates on savings can approach 50 percent for families with two children attending college for 8 years. In other words, for every dollar in savings above a threshold, parents may lose 50 cents in financial aid, lowering parents' incentive to save. In the past these very high tax rates did not apply to very many families, because many families' incomes were too high to qualify for any aid. However, as tuition levels rise, the marginal tax rates apply to an increasing number.

High marginal tax rates are an inevitable result of "backward-looking" means testing, in which financial aid is distributed according to the recent past income and assets of applicants and their parents (usually a single year of income and assets). In contrast, the income-contingent loan program may be thought of as a form of "forward-looking" means testing. It has three advantages: it targets resources on those with low earnings after they leave college (rather than just low family incomes in the year before they enter college); it provides some "insurance" to students from middle- and higher income families who may be anxious about their future labor market prospects given a large debt; and it broadens the base of income used for means testing from a single year to the student's whole career. Because parents' savings are not taxed when means testing is forward-looking, parents may even save more to contribute to their children's education. Moreover, this forward-looking means testing is more suited to the needs of older workers seeking to return to school, since the traditional backward-looking financial aid formulas were often designed with traditional college-age dependent students in mind.

In a time of rising tuition and strained public budgets, publicly guaranteed loans make the most of public resources while ensuring that young people use the Nation's educational resources prudently. The availability of the income-contingent repayment scheme protects those with very low or highly variable earnings later in their careers. If tuition levels continue to increase, limits on student borrowing under both the direct lending and the FFEL programs may need to be raised in coming years. At present, dependent undergraduate students (those who are unmarried, not veterans, with no dependents, and less than 24 years of age) can borrow only $2,625 during their first year in college, $3,500 during the second year, and $5,500 per year during the junior and senior years. Parents are allowed to borrow more under the Parental Loans for Undergraduate Students (PLUS) program. However, since payments on PLUS loans begin immediately, many parents may be reluctant or unable to take on the additional burden. Tuition expenses alone exceed the $2,625 limit at a group of public 4-year institutions that together enroll 42 percent of all undergraduate students. As a result, unless borrowing limits are raised, an increasing number of dependent students will not even be able to borrow enough under the Federal programs to pay their college tuition and living expenses.

Default Rates

Ever since the inception of the Federal student loan programs, defaults have been a significant concern. This concern was heightened, however, when default claims paid to lenders exceeded $2 billion for the first time in 1989. Under this Administration, the Department of Education has made lowering student loan default rates a high priority. Default rates differ markedly according to the institution the borrower attended. Therefore the Department of Education has imposed standards to preclude schools whose attendees have high default rates from receiving federally guaranteed loans: postsecondary institutions can lose eligibility to participate if they have a default rate in excess of 25 percent for 3 consecutive years. (The default rate is calculated as the percentage of loans going into repayment in a given year that default by the end of the following year. This threshold has been lowered from 35 percent in 1991 and 1992.) Approximately 250 schools have been declared ineligible to participate in the loan programs based upon their 1992 default rates. An additional 190 schools have appealed the calculation of their default rates, and it is anticipated, based on past appeals, that many of these institutions will also lose eligibility. Although it is difficult to distinguish the impact of regulatory efforts from the effects of an improving economy, the default rate has been cut nearly in half over the past few years: from 22

to 12 percent for debts going into repayment in the years 1990 and 1993, respectively.

Future Challenges

A college education is becoming both more expensive and more important for a successful career. The combination of these two trends is making parents and students increasingly anxious. The Federal Government provides a number of separate grant, loan, and work-study programs for college students, but this variety of programs may itself add to the lack of transparency in the financial aid process, increasing families' anxiety. Students and their parents could make better decisions regarding college if they knew more about how much they could borrow or receive in grants and how much they were likely to have to finance out of their own income and savings. Complicated means tests necessarily make it difficult for students to anticipate the exact mixture of grants and loans they will receive. Even so, there could be much better information about the size of the total package available. Moreover, parents and students who are worried about rising debt burdens may find that the more flexible options for repayment now available help relieve their concern.

BETTER OPTIONS FOR THOSE ALREADY IN THE LABOR FORCE

As different skills appreciate or depreciate in value, workers must have the opportunity to react to these changes in the labor market. As proposed in the G.I. Bill for America's Workers, the Administration has also been working to reinvent how the Nation delivers education and training services to those already in the workforce. Both the Congress and the Administration have proposed consolidating many of the separate education and training programs now administered by the Departments of Labor and Education and providing block grants to the States. These reforms are intended to convert our unemployment system into a re-employment system. Although the proposals differ in some details—particularly in the level of funding—they are similar in at least two important dimensions.

First, States would coordinate the delivery of employment and training services through one-stop career development centers. The goal of the one-stop centers would be to allow workers to find out about employment opportunities, apply for jobless benefits, learn about available training programs, and receive assistance in financing that training all in one place. Sixteen States have already received multiyear implementation grants from the Department of Labor to begin integrating an array of education, training, and employment programs into the one-stop centers. The remaining

States, which are at an earlier stage in the process, have all received grants to plan the transition to the one-stop concept.

Second, the Congress and the Administration have both proposed consolidating more than 70 existing training programs and giving training recipients the ability to choose the program that best meets their needs. Under the Administration's proposal, dislocated and low-income workers would be eligible for so-called skill grants of up to $2,620 per year to complete an associate degree, enough to cover tuition, supplies, and fees at a typical community college. Other proposals would provide the funding to States in the form of block grants but would also encourage States to allow recipients more discretion in choosing the training program that is right for them. Unlike the current system, in which government agencies often choose what training workers will receive and who will provide it, grants could be used by workers themselves to find the best match among eligible training providers. But any worker, regardless of his or her income or employment status, could use the centers to learn about training and education options and would receive guidance in applying for educational loans.

Both reforms are intended to enhance accountability among providers: training providers that do not attract workers' interest would be allowed to founder and the more successful programs to flourish. Accountability will be enhanced if the quality of information available to workers for assessing different programs, such as graduation rates or placement rates (using, for instance, unemployment insurance wage records to track the employment histories of graduates of each program), can be improved. By voting with their feet, workers themselves will be empowered to shut down ineffective training programs and expand those that meet the changing needs of the labor market—decisions that may be more difficult for program administrators to make.

The $10,000 tax deduction for tuition expenses in the Middle Class Bill of Rights (described in Chapter 3, Box 3–4) will also lower the cost of further training for those workers going back to school, as well as for families with dependent children struggling with large tuition increases.

CONCLUSION

Ever since the Nation's founding, the Federal Government has been a partner in education and training. It has served as a clearinghouse for research and evaluation results, contributed to equality of educational opportunity by targeting resources to low-income schools and college students, and guaranteed educational loans for college students. No other layer of government could assume these responsibilities as effectively and efficiently.

In addition to these traditional responsibilities, the Federal Government must also help coordinate a national response to the dramatic changes in the labor market. The Federal Government has responded by providing funds to States interested in developing new pathways from school to work. To add focus and momentum to school reform efforts, the Department of Education has offered seed money to States for the development of voluntary content standards in core subject areas and has encouraged States to develop testing tools for measuring their progress. Federal grants have supported the startup of charter schools and investments in educational technology. In these new endeavors, the Federal role is properly understood as that of a catalyst—vital but temporary.

Progress has been made. Despite some year-to-year fluctuations, test scores in math and science have risen for all age groups since 1980. High school graduation and college enrollment rates have also risen. But this is no time to drastically scale back those efforts. The shift in demand has continued to outpace the increased output of more skilled workers: earnings differences between the more and the less educated continue to widen. Someday the increase in supply may begin to overtake the increasing demand of the labor market and dampen future increases in wage inequality, but at least until that day arrives, the Federal Government must continue to support State and local efforts to transform their educational systems.

In the midst of efforts to balance the Federal budget, it is important to keep in mind that the objective of deficit reduction is to spur long-term economic growth by freeing up more of the Nation's savings for productive investment. To cut investment in education and training simply for the sake of balancing the Federal budget in the short term runs counter to that goal. Education and training have always been a major source of U.S. growth; as the economic returns have increased, these undertakings should represent a larger share of the Nation's investment portfolio, not a smaller one. As families and communities respond to the rise in the payoff to skill by investing in themselves, the Federal Government should not shrink from the task of encouraging and complementing their efforts.