Putting Students and Workers First? Education and Labor Policy in the 1990s

Alan B. Krueger
Princeton University and NBER

and

Cecilia E. Rouse
Princeton University and NBER

June 2001

We thank Lisa Lynch, Susan Dynarski, and Jane Hannaway for useful conversations and comments. We also thank Thomas Kalil [White House National Economic Council (NEC) from 1993-2001 most recently Deputy Assistant to the President for Technology and Economic Policy and Deputy of the NEC (2000-2001)], Robert Shireman [Legislative Assistant and then Chief Education Advisor to U.S. Senator Paul Simon (D-Ill.) (1989-1994), Legislative Director for Senator Simon (1995-1996), and Senior Policy Advisor at the NEC (1997-1998)], and Marshall Smith [Under Secretary of Education (1993-2000)] for extremely helpful and insightful background. Heather Morr and Nisreen Salti provided expert research assistance. All errors in fact or interpretation are ours.

This paper was prepared for the conference on “American Economic Policy in the 1990s,” Cambridge, MA, June 27-30, 2001.
1. Introduction

“Putting people first,” “It’s the economy stupid,” and “Making work pay” are three familiar slogans from Bill Clinton’s presidential campaign in 1992. All three of these slogans place labor and education policy at the top of the agenda. This paper addresses the main thrusts in federal education and labor policy in the 1990s. Specifically, the main legislative and administrative accomplishments are discussed and evaluated. The reality of the budget constraint side tracked and delayed the education and labor agenda, as did the shift in Congress in 1994. Nevertheless, several small steps and new programs were introduced that helped forge a more rational and efficient federal role in the education and training systems, and addressed the diverse concerns of many groups. In addition, labor policy made modest steps to address concerns generated by the changing composition of the work force and shifts in labor demand.

Table 1.1 presents basic labor market and education indicators corresponding to the peak and trough years (in terms of unemployment) since 1979. The central motivation for education and labor policy in the 1990s is easy to discern from the developments in the 1980s. Most prominently, in the 1980s and early 1990s wage dispersion increased dramatically. Real earnings for workers at the bottom of the wage distribution, in particular, fell considerably. Between 1979 and 1989, for example, the average real hourly wage of the worker at the 10th percentile of the wage distribution fell by 16 percent. The average real wage fell by 17 percent for male high school dropouts in this period, and by 12 percent for male high school graduates. A decline in fringe benefits, such as health insurance, further eroded the position of lower wage workers. Additionally, earnings in the middle of the distribution were stagnant, at best. While it is possible that biases in price deflators exaggerate the fall in real wages, the rise in inequality is indisputable. Putting

1Throughout the paper we use the GDP implicit price deflator to adjust for inflation.
People First (p. 2) put it this way: “While the rich cashed in, the forgotten middle class -- the people who work hard and play by the rules -- took it on the chin. ... The working poor had the door of opportunity slammed in their face.”

Much of the rise in wage dispersion is associated with formal education, cognitive ability, and work experience. For example, the college-high school wage ratio increased from 1.40 in 1979 to 1.63 in 1992. This led to increased emphasis on improving job prospects via human capital development. The rise in college tuition costs and popularity of education programs among the public also made college access a major policy thrust.

With unemployment high in 1992 -- and the recession of the early 1990s affecting white collar workers to a greater extent than past recessions – policy also focused on improving employment services, especially for middle class workers. President Clinton set a goal of creating 8 million jobs in his first term of office, which influenced much economic policy making.

In our view, four core principles underlaid most of the Clinton Administration’s initiatives in the labor and education arena, and connect the programmatic summary that follows. The first was an effort to make work pay and narrow wage gaps, broadly (and often ambiguously) defined. Examples of specific policies motivated by this principle include the minimum wage increase and expansion of the Earned Income Tax Credit. The second was a desire to increase the skills and productive capacity of the workforce, through improved preschool and K-12 education, greater college access, and life-long learning. The third was the reinvention of programs to make the federal role more cohesive, coordinated, and efficient. Goals 2000, the reauthorization of the Elementary and Secondary Education Act in 1994, student loan reform, and the Workforce Investment Act of 1998 are examples of policies motivated in large part by this
principle. The final principle was a desire to make it easier for workers and students to cope with change in a volatile economy. Examples include the School-to-Work Opportunities Act, One-Stop Centers, and the Lifetime Learning Tax Credit.

In the next section we consider education policy during the 1990s. Following that we discuss major developments in labor policy. Both sections describe the policies, focus on the motivation for the policy developments, and provide an assessment of the likely effects of the programs based on available research. The conclusion provides an integrated assessment of labor and education policy in the 1990s.

2. Education Policy

2.1. Background

2.1.1. Rationale for Government Involvement in Education

Three common economic justifications for government involvement in education are inequities in readiness for school, positive externalities to education, and imperfect credit markets. At the preschool level, one could make a case for government involvement out of concerns for equity. Rather than attempt to equalize outcomes, the government can attempt to compensate for unequal endowments through publicly funded early education (Currie, forthcoming). In addition, positive externalities arise when the social benefits to an individual becoming educated are greater than the individual benefits (Friedman, 1962). If the government did not subsidize education then individuals would not obtain as much education as is socially desirable. The case for positive externalities has usually been made to justify government subsidies at the preschool and elementary and secondary school levels, because such externalities include the ability to be an informed voter and to support oneself so that one is less likely engage in criminal activities or need
government assistance. At higher levels of education, however, economists have traditionally viewed most of the benefit of education to be private. That is, there are likely fewer positive externalities to higher education. (An exception is growth externalities which we interpret to be small or uncertain.) As a result, most of the justification for government subsidy of higher education has rested on imperfect capital markets, although evidence on the importance of such credit constraints is the subject of some debate, as discussed in the section on post-secondary education below. Most economists agree that some level of government support of education at all levels is justified. The debate is over the level and form of that support.

2.1.2. Backdrop for Education Policy in the 1990s

In addition to the economic trends discussed in the introduction, education policy in the 1990s was also motivated by a fear that the educational system was in “crisis.” The evidence came from three sources. First, wages of those without a high school degree had been in decline since the early 1980s, as discussed in the introduction. Second, in 1983 the influential *A Nation At Risk* cited the decline in SAT scores -- despite years of increasing school expenditures -- in declaring that our educational system had become a “rising tide of mediocrity.” The test scores of American students floundered, despite years of increasing expenditures. This sentiment continued throughout the 1980s. However, the composition of students taking the SAT changes over time. Rather, the only nationally representative and continuing evidence on student test scores comes from the National Assessment of Educational Progress (NAEP). Since the early 1970s the NAEP has periodically tested a sample of students at ages 9, 13, and 17 in mathematics,

---

2 Note that the existence of positive externalities is used to justify government subsidization of education but not necessarily government provision of education.
reading, and science. These series now comprise what are referred to as the “NAEP long-term assessments.” The long-term trends in reading and mathematics for 9-year olds by race are shown in Figure 2.1. We have divided the raw scores by the 1996 subject-specific standard deviation for all 9-year olds to generate standard deviation units.

The reading scores for White 9-year olds increased in the late 1970s and then started to decline slightly; those for African Americans also increased in the late 1970s but were relatively stagnant throughout the 1980s with a sudden dip in 1990. The overall trend in reading suggests that test scores have remained relatively constant since the early 1970s. Test scores in mathematics had shown somewhat more improvement between the early 1970s and 1990. Thus, the trends in NAEP scores do not suggest a “crisis” in education at the time. Many were concerned, however, that the overall levels of achievement were low and that the racial gap remained.

The perception of low national test scores was reinforced by comparisons of American students with those in other countries. For example, Bishop (1990) reports on results from international studies conducted during the 1980s by the International Association for the Evaluation of Education Achievement. U.S. students scored lower than their counterparts in almost all other countries tested in subjects such as algebra, biology, chemistry, and physics.³

It was in response to this statistical picture of the American elementary and secondary school system that education policy was shaped during the 1990s. Tables 2.1 and 2.2 summarize the main

³ The achievement of U.S. students has continued to lag behind those in other countries as reported by the Third International Mathematics and Science Study (TIMSS) from 1995 and the Third International Mathematics and Science Study-Repeat (TIMSS-R) from 1999.
education legislation and Administration initiatives passed since President Clinton took office. The programs reflect the Administration’s attempts to re-focus the federal government’s role in K-12 education to support the reforms already occurring in the States, and in post-secondary education to restructure financial aid. The programs also reflect the Administration’s belief that in order to improve education one must improve schooling inputs (such as class size and technology) while also increasing flexibility and competition from within the public school system. In this section we describe many of these major education policy initiatives of the 1990s and summarize the existing relevant research.

2.2. Early Education

Given the economic trends, the Clinton Administration sought to design an overall agenda to develop human capital in the U.S., and it is not surprising that it chose to put a major emphasis on preschool. While there is serious debate over the value of education and training for some groups of adults, few dispute the value of early education. Those children who arrive at kindergarten not ready to start learning to read and write, and learn mathematics are at much higher risk of never catching up. In addition, the public is sympathetic to young children. Therefore, many believe that the most effective educational programs target the youngest children. If children develop a curiosity about learning and have a solid foundation upon which to develop new skills, they will carry these skills forward through the rest of their schooling. It is equally plausible to believe that policies that attempt to compensate for years of inadequate education will be more expensive or less effective.

The primary federal program in this area is Head Start. The program was started in 1965 as part
of President Johnson’s War on Poverty. Although it began as a summer program serving 500,000 children aged 4-5, it was soon expanded to a full-year program that serves children ages 3-5. The program has always enjoyed bipartisan support since it is hard to argue with the basic premise: give children from disadvantaged families the skills they need to succeed in elementary school.

A unique aspect of the Head Start Program is its “whole-child” approach. Children receive medical care and meals, in addition to developing the educational and social skills that they will need in order to succeed in school and later life. Head Start has also emphasized educating the “whole family.” A significant fraction of Head Start is staffed by parents of current or former Head Start children. Thus, the program was designed to provide “spill-overs” to the siblings of participating children. In 1992 there were just over 620,000 children enrolled Head Start at a (federal) cost of $4,100 (in 2000 dollars) per child. By 2000 enrollment had increased by 38% or by about 250,000 children. In addition, the federal funding per child had increased to about $6,100 for a total of $5.3 billion (U.S. Administration for Children, Youth, and Families, 2001b). Despite this size, the program only serves about 35% of eligible children, mostly because the program has never been fully funded by Congress (Currie, forthcoming).

The Clinton Administration sought to “expand and improve” Head Start through the 1994 reauthorization of the Head Start Act as well as amendments passed in 1998. The primary focus of these pieces of legislation is to improve the quality of Head Start programs through better staff training and career development, higher salaries for Head Start workers, improved federal oversight, and better facilities. Further, under the new performance standards, grantees would lose their federal funding if their

---

4 Zigler and Muenchow (1992) provide a informative look at the history of Head Start.
performance fell below a minimum quality level and they failed to correct problems quickly.

One of the primary criticisms of the program is that it does not generate long-run effects. Rather, the early evidence suggested that children who had participated in Head Start had short-run improvements in IQ test scores, but that these gains “faded-out” by the third grade (see Barnett (1995) for a review of this literature). Most notably Jensen (1969) and Herrnstein and Murray (1994) argue that because the program fails to permanently increase the IQ of participants, compensatory preschool (including Head Start) is a failure that does not warrant the expense.

The cause of the “fade-out” is not clear. However, a leading hypothesis is that the school quality of the subsequent elementary schools attended by Head Start participants does not sustain the intellectual advantages incurred by the preschool program. In addition, the single-minded focus on IQ is extreme and rests on the undocumented belief that IQ test scores are all that matters for labor market success. As it turns out, those who have examined the effects of compensatory preschool programs on longer-run outcomes have tended to find that attendance at preschool makes a significant long-term difference.

For example, Barnett (1992) reviews several studies on compensatory education programs. He

---

5 A second issue for Head Start has been a tension between the educational and other services of the program. This surfaces periodically in consideration of moving the program administration from the Department of Health and Human Services (HHS) to the Department of Education. Although many view it as a preschool program, in fact education has only been one component. Further, many of the Head Start programs, which are administered at the local level, are run by community-based organizations. At the beginning of the 1990s only about one-third of the programs were administered by schools. Advocates of housing the program within HHS fear that the focus on comprehensive services and parental involvement would be diminished if it were in the Department of Education. Critics argue that it should be in the Department of Education and that there should be a greater focus on education (Zigler and Muenchow, 1992). For now the program remains in HHS, however President George W. Bush has revived interest in moving it to the Department of Education and he would like to increase the focus on reading skills. This issue will be debated during the 2003 reauthorization of the Head Start Act.
finds that the short-run effects on IQ fade-out, but there are longer term effects on school success, such as whether the children are ever held back a grade and whether they are placed in special education. More recently, Garces, Thomas, and Currie (2000) find that participation in Head Start is associated with higher rates of high school graduation and college attendance, and lower rates of criminal activity in the Panel Survey of Income Dynamics (PSID). Unfortunately, most of these studies are based on non-experimental methods or the number of study participants is quite small. However, a few long-term evaluations of preschool programs have used randomized assignment in which one group of students is randomly selected to participate in preschool (the treatment group) and a second is not (the control group).

The oldest of these studies to examine the long-run effects is based on the now famous Perry Preschool Project (Schweinhart, Barnes, and Weikart 1993). The Perry Preschool Project began in 1962 in Ypsilanti, Michigan. The project was designed as a compensatory preschool project and targeted towards African American children from disadvantaged families. The results from the evaluation suggest that the program suffered from the same “fade-out” that has been found in other compensatory preschool programs. At age 7, approximately two years after leaving the program, participants scored 4.6 points higher on IQ tests than children who received no preschool. The difference had disappeared by age 9. However, the program positively affected other measures of school success. For example, the children who had attended preschool scored higher on achievement tests (as opposed to IQ tests), were less likely to be classified as mentally retarded, spent less time in special education, were more likely to graduate from high school, were more likely to attend some form of post-secondary education, were more likely to be employed, and were less likely to have received welfare or to have been arrested at age 19. At age 27, the participants had higher earnings, were less likely to have received welfare, and were less likely to have
had a significant number of arrests.

A second, more recent, randomized study is the Carolina Abecedarian Project, which began in 1972. At birth, low-income children were assigned to treatment and control groups. Those in the treatment group received enriched center-based child care services (8 hours per day, 5 days a week, 50 weeks per year from birth to age 5). When entering school, the children were again randomized into two groups in order to help the researchers disentangle the effects of early from later interventions. Those in the treatment group received a “Home School Resource Teacher” who provided supplemental educational activities, served as an intermediary between the child’s family and the school, and helped the family to secure social services (such as child care) (Campbell and Ramey, 1994, 1995). By age 21, the researchers report that children who participated in the program had higher cognitive test scores, had completed more years of education, were more likely to attend a four-year college, and were older when their first child was born. Further, they find that the preschool intervention was much more effective than the school intervention suggesting that earlier programs are more effective than later ones (Campbell, Pungello, et al. 2001; Campbell, Ramey, et al. forthcoming).

Finally, the 1994 reauthorization of the *Head Start Act* created Early Head Start, a program designed to serve low-income families with children under the age of three and pregnant women. The Early Head Start programs provide child development services to improve cognitive and language development, social-emotional behavior, and health and they attempt to develop family and community partnerships. Services may be provided exclusively at centers, exclusively through home visits, or a combination of the two. In 2001, the program will serve 55,000 children with a budget of $560 million.

Mathematica Policy Research, Inc. is currently conducting a randomized evaluation of Early Head
Start. The evaluation began in 1996 and includes Early Head Start centers from around the country. Results from an interim report published in January 2001 suggest that, at 2 years of age, Early Head Start children had higher scores on tests of cognitive development and were reported by their parents to have larger vocabularies and use more grammatically complex sentences than children who were in the control group (U.S. Administration for Children, Youth, and Families, 2001a).

Although they report large benefits, both the Perry Preschool and Carolina Abecedarian projects are distinguished by the fact that they were expensive and intensive. The small class sizes and intense involvement of the teachers with parents are not found in current Head Start programs. For example, a recent estimate by researchers at the RAND corporation suggests that the cost of Head Start is 71% that of the Perry Preschool project (Karoly, et al. 1998). Therefore, the question remains whether the benefits of early education programs, particularly Head Start, outweigh the costs. Cost-benefit analyses of the Perry Preschool Project suggest that although expensive, the benefits (both private and social) of the program in terms of reduced crime, welfare dependence, and increased earnings (and therefore tax contributions) far exceeded the expense (Barnett 1993, Karoly, et al. 1998). And, based on a back-of-the-envelope cost-benefit analysis, Janet Currie concludes that “Given the short- and medium-term benefits ... Head Start would pay for itself if it yielded long-term benefits that were even a quarter as large as those of Perry Preschool.” (Currie, forthcoming, p. 30). Further, because many of the studies report greater impacts for the most disadvantaged children, the net benefits may be even greater for those most in need. Thus, the results suggest that although publicly-funded compensatory preschool programs may not permanently increase IQ, they have the potential to significantly improve the adult lives of their participants.
2.3. Elementary and Secondary (K-12) Education

Elementary and secondary school policy in the United States is largely determined at the state and local levels. In 1999 approximately 45% of revenues came from local governments, 48% from state governments, and the remaining 7% from the federal government (U.S. Department of Education, 2000b). In the early 1990s, the federal role in education was dominated by Chapter 1 (now called Title I) of the Elementary and Secondary Education Act (ESEA) which attempts to address perceived inequities in education by redistributing funds to low-income and disadvantaged schools and districts. Thus, one of the challenges President Clinton faced in establishing a legacy in education (and becoming known as the “Education President”) was to have significant influence in an area over which the federal government has little budget authority and little direct control.

During the 1980s, many states and districts (partly in response to the release of A Nation At Risk) began to reform their educational systems by instituting policies such as teacher accountability systems, high school graduation requirements, smaller class sizes, longer school years, and site-based management. The aim was to increase school accountability and to provide the resources to help schools succeed. While few disputed the need for educational reform, how to achieve greater accountability and whether or not greater resources were needed, were controversial issues.

A simplistic characterization of the debate was (and still is) of two camps. In one camp are those who believe that the fundamental problem with our educational system is a lack of school choice. Because

---

6 Federal funds for education are not spent on the “basics” (e.g., teacher salaries and the operation and maintenance of buildings) rather for “discretionary” purposes (e.g., purchasing computers and other teaching tools) and for additional services required to meet the needs of disadvantaged and special needs children (Jennings, 1995).
children are assigned to attend their neighborhood schools, schools have a kind of “monopoly” power and very little incentive to provide a quality education. Therefore, as discussed below, the way to reform the educational system is to introduce more competition into the marketplace, either through vouchers to help children attend private schools or through greater choice within the public school system, including charter schools. Through the forces of market competition, schools would be held accountable and forced to improve to attract students. Many who subscribe to the market model believe the educational system is not in need of more resources (such as smaller class sizes) as the U.S. already has one of the highest expenditures per capita among industrialized countries (Hanushek, 1986, 1997; U.S. Department of Education, 2000b).

In the second camp are those who believe that introducing private school vouchers in order to hold schools accountable it too extreme. Rather, many of them believe that there is already ample competition within the public school system arising from “residential (Tiebout) choice,” or the fact that many families choose the neighborhood in which to live based on the quality of the local schools (Tiebout, 1956). Furthermore, many argue that one can construct an accountability system in which schools that do not attain certain pre-determined goals are sanctioned by, for example, withholding funding. Underlying this view is a belief that the system can be reformed within the existing structure, provided it is given ample resources to lower class sizes, lengthen the school day or year, provide professional development, and improve other inputs. However, providing such additional resources is difficult for state and local governments facing

7 In fact, some of these writers would argue that any large-scale voucher program would also eventually need a structure by which to hold schools accountable eventually leading to a new bureaucracy and entailing substantial cost (Levin, 1998).
many competing demands on their revenues. In addition, the challenge of this approach is to devise a sensible and fair accountability system. Because there are so many inputs to education it is difficult to isolate the contribution of the school from the contributions of the family, peers, and other external forces.

The route most states and school districts took during the 1980s was to attempt reform from within the public school system. The federal government, however, remained relatively uninvolved with these reforms. In fact, some would argue that the federal government’s requirements at times directly conflicted with the reform efforts of states. In an attempt to modernize and expand the federal government’s role in K-12 education, President Bush along with state governors (members of the National Governor’s Association) held an Education Summit in 1989. Then-Governor Bill Clinton of Arkansas was co-chair of a task force on national goals that formed the basis for the agenda of the summit (Schwartz and Robinson, 2000). During the summit, six National Education Goals were endorsed. Although President Bush attempted to translate these six education goals into legislation (called America 2000), he did not succeed, largely due to his support of school vouchers and the inclusion of voluntary national tests.

These goals include: All children in American will start school ready to learn; The high school graduation rate will increase to at least 90 percent; All American students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, history, and geography, and every school in America will ensure that all students learn to use their minds well, so that they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy; U.S. students will be first in the world in mathematics and science achievement; Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship; Every school in the U.S. will be free of drugs, violence, and the unauthorized presence of firearms and alcohol, and will offer a disciplined environment conducive to learning (Alexander 1993).

Chester Finn, president of the Fordham Foundation, is reported to have quipped when the Clinton Administration’s own proposal for voluntary national tests failed, “Republicans don’t like ‘national,’ Democrats don’t like ‘test.’” (Cited in Schwartz and Robinson (2000))
Thus was the scene when President Clinton took office.

2.3.1. Standards-based Reform

Given his involvement in their development, it is not surprising that one of President Clinton’s first legislative actions was to propose legislation that would resuscitate the National Education Goals, although his proposal did not include school vouchers. This proposal resulted in the Goals 2000: Educate America Act of 1994, the foundation upon which much of the Administration’s subsequent education policy was built.\(^\text{10}\)

Through Goals 2000, the federal government has authorizing authority to provide grants to states (which in turn provide grants to districts and schools) to encourage comprehensive educational reform. The idea was to move the federal government’s role in education away from only categorical programs and to provide instead support for the reform efforts that states and districts are already undertaking or to encourage them to do so. In order to qualify for the federal funding, states must submit “State Plans” which describe the standards to which schools and districts will be held and the policies in place to help the educators achievement them. The aim was to have states articulate “content standards” (what students should know) as well as “opportunity-to-learn standards” (what resources districts will devote to helping

\(^{10}\) The national goals in Goals 2000 includes two additional goals: The nation’s teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century; and Every school will promote partnerships that will increase parental involvement and participating in promoting the social, emotional, and academic growth of children. It also expands the list of subjects over which students will have competency to also include foreign languages, civics and government, economics, and the arts.
students achieve the content standards).\textsuperscript{11} A key element of the legislation is for states to set clear, high academic goals and for the federal government to relax regulations and requirements that interfere with state reform efforts. Thus, Goals 2000 was an attempt to promote “standards-based” reform and accountability throughout the American educational system. Secretary of Education Richard Riley describes it as “...nothing less than landmark legislation, as important in its own way as the Morrill Act and the Elementary and Secondary Education Act.” (Riley, 1995) In his remarks at the signing ceremony for Goals 2000 President Clinton said, “Goals 2000 is a new way of doing business in America. It represents the direction our government must take in many problems in the 21\textsuperscript{st} century.” (cited in Riley, 1995)

The reauthorization of the ESEA in 1994, known as the \textit{Improving America’s Schools Act} (IASA), attempts to reinforce Goals 2000.\textsuperscript{12} That is, it attempts to move away from programs ascribed by the federal government that bear no relation to the reform efforts of states, and towards much more federal government assisted state- and district-initiated reform. Further, it pushes states and districts to include \textit{all} students in their reform efforts (including low-income and those receiving special services) and to help \textit{all} students achieve the same high standards. As an example of its attempt to increase flexibility, the Department of Education moved to drop every regulation not required by law. The attempt to allow more flexibility made it difficult for the Administration to simultaneously impose tough performance standards.

\textsuperscript{11} One controversial aspect of the Goals 2000 legislation was the creation of a 19 member National Education Standards and Improvement Council (NESIC) to help states develop their standards (and help provide some quality control over the program). Republicans viewed the proposed NESIC as too much federal involvement in state reform efforts and it “died” in 1995 when Representative William Goodling (R-PA) introduced legislation to eliminate it (Schwartz and Robinson, 2000).

\textsuperscript{12} See the essays in Jennings (1995) for a nice overview of the background and issues surrounding the 1994 reauthorization of the Elementary and Secondary Schools Act.
standards, for it is difficult to introduce new regulations on accountability while also decreasing the overall level of regulation. As a result, the performance accountability provisions that were ultimately included in the legislation were relatively lax (some with time-lines that extended past the five years of the reauthorization of the ESEA, for example) and enforcement of some of the standards in the IASA was not as tough as lawmakers envisioned (Smith, Scoll, and Plisko, 1995; phone interview with Marshall Smith, 2001).

Critics of Goals 2000 and the IASA, such as Bruno Manno, formerly of the Hudson Institute in Washington, D.C., argue that the Clinton Administration’s approach to accountability and standards-based reform is just government “business as usual.” In particular, Manno argues that Goals 2000 puts more emphasis on schooling inputs (class size, spending per pupil, how teachers teach) than outputs (student achievement) because of the “opportunity-to-learn” standards that measure school resources. Further, he notes that the State Plans reflect a “top-down” centralized view of education with the Secretary of Education as central planner (Manno, 1995).

Has the standards-based reform worked? If one defines the central goal of Goals 2000 as being encouragement for states to implement content standards and other elements of the standards-based reform, then the policy has been a success. Although only funded at $92 million in 1994, in 2000 Goals 2000 was appropriated $458 million, which suggests continuing (and growing) Congressional support. Further, while only a few states had defined standards in the early 1990s, today 47 states plus the District of Columbia have content standards and 25 have performance standards (Goals 2000 Fact Sheet, 2001). But ultimately the goal of Goals 2000, and of the IASA, is to raise student achievement. And, unfortunately it is difficult (if not impossible) to separately identify the impact of the federal contribution from the state
There is a small economics literature on the impact of grading standards on student achievement. See, for example, Costrell (1994) and Betts (1998) for theoretical models; and Bishop (1990), Betts and Grogger (2000), and Figlio and Lucas (2000) for empirical papers. Both the theoretical models and empirical evidence seem to suggest that higher standards primarily improve the achievement of already high-achieving students, although Figlio and Lucas report as well that this depends on the average achievement of the students’ peers.

The German apprenticeship system is often used to highlight the absence of a U.S. system that facilities the transition from school to work (Hughes, Bailey, and Mechur, 2001).

2.3.2. The School-to-Work Opportunities Act

Soon after Goals 2000 was passed, a complementary piece of legislation, the School-to-Work Opportunities Act of 1994, was signed into law. School-to-Work was motivated by concern that a majority of students enter the workforce without a bachelor’s degree (including a large number of students who do not complete high school) and that many are not adequately prepared to face the changing workplace of the “new economy.” As such, it attempts to create systems (not just programs) that promote the education and career preparation of young people beginning in middle school (School-to-Work Opportunities Act of 1994 (Public Law 103-239), Hughes, Bailey, and Mechur 2001). Jointly administered by the Departments of Education and Labor, the program provides funds to States and local communities to form partnerships among local educational institutions, employers, community-based organizations, parents, and students. These partnerships are meant to expand promising activities, such as

---

13 There is a small economics literature on the impact of grading standards on student achievement. See, for example, Costrell (1994) and Betts (1998) for theoretical models; and Bishop (1990), Betts and Grogger (2000), and Figlio and Lucas (2000) for empirical papers. Both the theoretical models and empirical evidence seem to suggest that higher standards primarily improve the achievement of already high-achieving students, although Figlio and Lucas report as well that this depends on the average achievement of the students’ peers.

14 The German apprenticeship system is often used to highlight the absence of a U.S. system that facilities the transition from school to work (Hughes, Bailey, and Mechur, 2001).
Career Academies are “schools-within-schools” in which each year groups of students take several classes together with the same group of teachers. The continuity is designed to promote solid relationships among teachers and students and thereby increase student engagement in high school. Each Academy focuses on a particular career theme around which the teachers organize the academic and occupation-related classes (to promote the relevance of the material to the “real world”). Academies also develop partnerships with local employers for help in planning the program and as a source of mentors and internships (Kemple and Snipes 2000).

Critics, most notably Phyllis Schlafly of the Eagle Forum, view School-to-Work as a vocational track that discourages the learning of basic academic subjects. Advocates respond that the goal of such activities is to help students attend college or receive additional training if they so choose, as well as provide students with the knowledge and skills needed to obtain a well-paying job directly out of high school. The idea is to motivate students by providing them with knowledge of career opportunities in the real world. However, while more than 90% of secondary school students in states that had received federal School-to-Work grants attended schools in districts with partnerships between their school and local partners, only 3% had received all three components that advocates of School-to-Work believe are necessary: career-related academics, comprehensive career development activities, and paid or unpaid work experience lined to school (Hughes, Bailey, and Mechur 2001). Rather, most programs have focused on the less intensive (but easiest to implement and least controversial) activities such as “job shadowing” and brief work-site visits.

---

15 Career Academies are “schools-within-schools” in which each year groups of students take several classes together with the same group of teachers. The continuity is designed to promote solid relationships among teachers and students and thereby increase student engagement in high school. Each Academy focuses on a particular career theme around which the teachers organize the academic and occupation-related classes (to promote the relevance of the material to the “real world”). Academies also develop partnerships with local employers for help in planning the program and as a source of mentors and internships (Kemple and Snipes 2000).
Recently, researchers at Teacher’s College at Columbia University released a report reviewing the research on School-to-Work, including a study by the Manpower Demonstration Research Corporation (MDRC) that used random assignment to evaluate Career Academies (Hughes, Bailey, and Mechur, 2001; see also Kemple and Snipes, 2000). Results from the MDRC study suggest that at the end of their scheduled 12th grade year, students at-risk of dropping out of high school in Career Academies had improved attendance and increased academic course-taking; among all students there was only a slight reduction in drop-out rates, however. Further, the students in Career Academies did not have improved standardized reading and mathematics test scores. Hughes, Bailey, and Mechur conclude that the other evidence is supportive of School-to-Work as well. However, such results must be taken as preliminary. For example, the MDRC study is only based on results as of the 12th grade; a second phase of the study will follow the students for up to four years post high school.

School-to-Work is another initiative that received much focus in the first part of the Administration, but faded as attentions turned to other priorities. And although authorization is due to expire in 2001 (with little or no momentum to attempt re-authorization), school-to-work type activities are allowable under the new job training legislation, the Workforce Investment Act (see below).

### 2.3.3. School Vouchers

The Clinton Administration chose not to support school vouchers, programs that would provide

---

16 In studying public school choice in Chicago, Cullen, Jacob, and Levitt (2000) find that students who attend the city’s career academies are more likely to graduate than those who attend other types of high schools.
vouchers for (generally low-income) children to attend private schools. Advocates of vouchers argue that
teachers’ unions and bloated bureaucracies impede improved resources from reaching the classroom and
increasing student achievement (Chubb and Moe, 1990). Further, because children are required to attend
their neighborhood school, the system has no incentive to change (Chubb and Moe, 1990; Friedman,
1962). While wealthier parents can voice dissatisfaction with their residential school by moving to another
neighborhood or enrolling their child in a private school, poorer parents cannot. Vouchers would, at a
minimum, provide disadvantaged children more educational options. If, in addition, they were to receive
a better education in the private schools, the program may offer a cost-effective way to improve student
achievement, at least for those students who use the vouchers.

Some argue that a large voucher program would also improve the schooling of all children. In the
most unrestricted program, all (or a substantial fraction) of the students in the public schools would be
eligible to attend a private school. Since state funding would be tied to student enrollments, the public
schools would have to “compete” for students, as in the marketplace, which would give the public schools
an incentive to improve. One of the theoretical advantages of a voucher program is that it shifts the burden
of standards and accountability to the marketplace. If a school is not performing to the standards
demanded by parents (the consumers), then the schools will not attract students. Thus, the government
does not need to assess, through an elaborate bureaucracy, whether or not a school or district has reached
its academic goals and the government does not have to find itself in the awkward position of having to
sanction (such as by withholding funds) “failing” schools.

While vouchers have many supporters, others question the validity of applying the economic model
to the education market (e.g., Bagley, Woods, and Glatter, 1996; Frey, 1992; and Garner and Hannaway,
1982). Because public schools are not “profit maximizing” enterprises, the nature and extent of their responses to competitive pressures is not obvious. Opponents also worry that vouchers would lead to a widening of the achievement gap between various groups of students because family resources, including information about school quality, are unequal (e.g., Schneider, 1999). Similarly, vouchers could lead to reduced public support for public schools, both in terms of desire to fund the public sector as well as volunteer efforts in the public sector (particularly if the most motivated parents leave for the private sector). All of these factors could lead to increased inequality in student outcomes, and reduced student outcomes for those “left behind” in the public schools.

Evidence on school vouchers mostly comes from evaluations of existing programs. However, it is important to keep in mind that most of these programs are too small to provide insight into the potential student achievement benefits of a large voucher program. They cannot show whether providing vouchers would also improve the schooling of students who remain enrolled in the public schools. Analysis of the existing programs, can, however, indicate whether the private schools participating in the program are “better” than the public schools.

The best evidence to date comes from experiments in which one group of students is randomly allocated a voucher (the “treatment” group) and a second group of students is (randomly) denied a voucher (the “control” group). This experiment is currently being conducted in several cities around the country,

\[\text{\footnotesize 17}\] In addition, Fernandez and Rogerson (1996) and Glomm and Ravikumar (1992) suggest that more decentralized school systems generate more income inequality. And Epple and Romano (1998) and Nechyba (1996) predict increased ability sorting within schools with the introduction of private school vouchers. At the same time, by decoupling the residential and schooling decisions of families, racial and income stratification within schools could also decrease with the introduction of school vouchers.
mostly by Paul Peterson of Harvard University. The longest running experiment is being conducted in New York City, with vouchers funded by the School Choice Scholarships Foundation. This program, which began in the spring of 1997, provides scholarships worth up to $1,400 annually which can be used at both religious and secular private schools for at least three years. A report issued by Mathematic Policy Research, Inc. based on two years of data suggests that the parents of children offered a voucher are more satisfied with their child’s school (Myers, et al., 2000). However, it also reports that, overall, the test scores of students offered a voucher are about the same as the test scores of students who were not offered a voucher. One exception to this overall finding is that the test scores of African American students who were offered a voucher did improve relative to those who were not offered one. This result, though suggestive, only holds for students who were in the 6th grade; there were much smaller (statistically insignificant) gains among African American students in grades 3-5. In fact, the finding of positive impacts on test scores for African Americans, but not for non-African Americans, holds across the other two, more recent, experiments in Dayton, Ohio and Washington, D.C. as well (Howell, Wolf, Peterson, and Campbell, 2000).

Because the voucher experiments are relatively new and their full effects are as yet unknown, researchers have also used non-experimental evidence to assess whether attending a private school improves the achievement of the students who use vouchers. Evidence from the Milwaukee Parental Choice Program, the oldest publicly-funded voucher program in the nation, also suggests mixed effects on student achievement. Specifically, students selected to attend a voucher school experienced significantly faster gains in math scores, but showed no differential gains in reading (Rouse, 1998a,b). These results also held for African Americans, although Hispanic students who attended a voucher school also showed
significantly faster gains in their reading test scores (Rouse, forthcoming).

These early results from the voucher experiments are encouraging in that voucher parents are more satisfied with their children’s schools. And, there is some evidence that the achievement of African American students offered vouchers improves as well. There are, however, several unanswered questions. For example, these results are only from relatively early years of the programs; over time the effects may become even stronger or may diminish — it is too early to tell. In addition, all of these programs are too small (or were too small at the time of analysis) to reveal the effects of a larger-scale program. That is, they cannot determine whether the achievement of students that remain in the public schools would also improve and whether the public schools would become more efficient by providing a better education at the same (or lower) level of expenditure or whether they would provide the same quality of education and decrease their expenditures.

Thus, the academic research to date (and even more so back in the early 1990s) cannot help to evaluate whether or not overall student achievement would have shown more improvement had the Clinton Administration chosen to support vouchers. And, given the paucity of evidence, it is not surprising that the decision of whether or not to do so rested primarily on politics and other concerns. Back in 1992, the Administration’s decision was heavily influenced by four factors. The first was that the teacher’s unions, big supporters of the Clinton Administration, were opposed to vouchers. The second was that in the early 1990s the default rates for student loans were at record high levels due to financial aid improprieties at many vocational proprietary schools. The experience from this market at the post-secondary level led
many Administration officials to be concerned that similarly disreputable schools could open in a market at the elementary and secondary level. They feared that students, particularly those of low-income parents, would suffer unless there was substantial regulation which would diminish the theoretical value of the vouchers.

There were also concerns about the legality of providing vouchers for students to attend religious private schools. Given that only 21% of private schools are non-sectarian (accounting for 15% of private school enrollment), the Administration believed that unless the vouchers could be redeemed at religious schools as well they would not provide the majority of students with significantly more educational choice (U.S. Department of Education, 2000b). (Of course, if vouchers had been provided new private schools at which students were eligible to use the vouchers may have opened.) Finally, President Clinton strongly supported a public education system and believed that private school vouchers would drain money from public schools.

And so the decision was made not to support a policy of providing vouchers for students to attend private schools.

### 2.3.4. Charter Schools

Charter schools are public schools that have a contract with the state or the school district. The contract, or charter, specifies the terms of their operation and obligations in order to receive state funds.

---

one-quarter of borrowers defaulted within one year of beginning repayment (Department of Education, 2001). Students had not acquired marketable skills (if, indeed, they even remained enrolled in school) and then did not pay back the loans, either for lack of an income or out of ignorance. Meanwhile the schools profited at the taxpayers’ expense.
And, as long as the school meets pre-established accountability goals, charter schools have more autonomy than do regular public schools in decisions regarding staffing, curriculum, and school organization (Nelson, et al, 2000). In 1999, 70% of charter schools were newly created schools; the rest were pre-existing public or private schools that chose to convert to charters. Further, charter schools were relatively small in size. The median charter school had about 140 students, whereas the median for all public schools in charter states was about 475 (Nelson, et al., 2000). In 1992, only two states had charter legislation, Minnesota and California, and the only two charter schools in existence were in Minneapolis. By 1999, 36 states and the District of Columbia had charter legislation covering over 1,600 charter schools (Nelson, et al., 2000). In 2000, over 500,000 children were enrolled in charter schools (John Kraman, Director of Research, The Center for Education Reform (unpublished data)).

The arguments advanced by charter school advocates are quite similar to those advanced by voucher advocates. Namely, charter schools are more innovative and responsive to the needs of students than are public schools. Because they only exist if parents choose to enroll their children, the schools must provide relatively high-quality education. Because they provide an alternative to the local public school, charter schools inject additional competition into the local education market and should therefore stimulate the local public schools to improve as well. At the same time, charter schools are often supported by those who oppose vouchers for private schools because they operate within the public school system, although with many fewer regulations.

Opposed to private school vouchers, President Clinton did, however, support the notion that public schools needed additional competitive pressure to become more efficient. He was also sympathetic to the argument advanced by voucher proponents that parents should have more choice about the kind and style of education their children would receive. (As Candidate Clinton wrote, “Every parent should have the
right to choose the public school his or her child attends....” (Clinton 1992)) Such choice would stimulate more “market” accountability as well as increase parental satisfaction with schools. As a result, one of the Administration’s early and major policy initiatives was to support the creation of more charter schools (and other forms of public school choice).

The first piece of legislation was the Public Charter School Program under Title X, Part C of the re-authorization of the ESEA in 1994. Because the initial start-up cost is one of the most commonly cited problems for new charter schools, the program aimed to assist in the planning, program design, and initial implementation of charter schools through grants to states. The Charter School Expansion Act of 1998 extended the authorization of the Public Charter School Program through fiscal year 2004 and amended it to target funds to states with the strongest charter statutes (thereby allocating funds to the most autonomous charter schools). Federal support for charter schools grew along with their expansion across the states. In 1995, this program was funded at $6 million dollars; by the 2001 fiscal year budget it received $1.9 billion.

As with vouchers, there is not much evidence on charter schools mostly because they are relatively new, are heterogeneous, and because the schools tend to be relatively small. In one of the few statistical evaluations of charter schools, Bettinger (1999) examined the effect of charter schools in Michigan on student achievement. He reports that the test scores of students in charter schools did not improve relative to those in similar public schools; he also finds that charter schools had little effect on the test scores of students in the neighboring public schools. Thus, his results suggest that charter schools may not be more effective than local public schools and that competitive pressure from nearby charter schools does not cause
In contrast, Hoxby (2000a) finds that public school student outcomes improve in areas with greater competition from other public schools. More recently Eberts and Hollenbeck (2001) have also studied the effect of charter schools in Michigan on the achievement of students in the charter schools and on those in neighboring public schools. In general they find that students in charter schools scored lower on standardized tests, and only mixed evidence of a positive effect of charter schools on neighboring public schools. However, their lack of credible controls for student characteristics renders these results quite tentative.

2.3.5. Class Size Reduction

While Goals 2000 emphasizes content and performance standards, it also includes standards based on school inputs, so-called “opportunity-to-learn” standards. One such input is class size. The Administration argues that its initiative to reduce class sizes in grades 1-3 to a national average of 18 students per class was motivated by the research on class size (discussed below), but it is also clear that reducing class sizes is a favored policy by the teacher’s unions and the public. A Gallup Poll conducted in the June of 1998 asked respondents whether they would favor or oppose “…providing funds to be used to reduce class size in grades 1, 2, and 3” -- Eighty percent of respondents favored such a policy (Phi Delta Kappa, 1998).

In 1999, the Administration created the Class Size Reduction Program. The program provides grants to states to help schools recruit, hire, and train teachers to reduce class sizes in grades 1-3. The ultimate goal of the program is to hire “100,000 New Teachers” to reduce class size. In structuring its initiative, the Administration attempted to learn from the experience in California which reduced its class size.
sizes to a maximum of 20 students in grades K-3 in 1996 in a program championed by then-Governor Pete Wilson (CSR Research Consortium, 2000). In the first years of the California program, schools struggled with a lack of classroom space and a “shortage” of qualified teachers. As a result, the Administration attempted to phase in the Class Size Reduction Program over several years and to package it with other programs to improve the quality of teachers and increase classroom space (programs such as State Grants for Improving Teacher Quality and Transition to Teaching as well as the school construction and modernization bonds), although these supporting efforts were less successful.

Evidence on the effect of class size on student achievement from observational studies is mixed. On the one hand, Eric Hanushek of the Hoover Institution, has argued that studies of class size (and other school resources) tend to find unsystematic and often statistically insignificant results.\(^{21}\) Hedges, Laine, and Greenwald (1994), on the other hand, perform a meta-analysis that aggregates the literature and finds sizable class-size effects. Moreover, Krueger (2000a) reanalyzes Hanushek’s results and finds that Hanushek’s pessimistic conclusion about the efficacy of class size depends critically on how studies are assigned weights. Hanushek extracted multiple estimates from many studies – as many as 24 in some cases – and treated estimates as the unit of observation. If, instead, each study were treated equally, then the results do exhibit a systematic effect of smaller classes (or more dollars generally) on student achievement.

In any case, a direct assessment of whether class size reduction works is difficult, at best, with observational data. The biggest challenge in such a study is to isolate the effect of the input in a given year,

\(^{21}\) See, for example, Hanushek (1986, 1997).
per se, from other factors such as family background and school inputs in previous years. This problem is overcome in a well-designed experiment.

Probably the best available evidence on class size comes from Project STAR, the largest randomized experiment ever conducted aimed at understanding the effect of smaller class sizes on student achievement.\(^{22}\) In the 1985-1986 school year, approximately 6,000 kindergarten students in Tennessee were randomly assigned to one of three groups: small classes (13-17 students per teacher), regular-sized classes (22-25 students), and regular-sized classes (22-25 students) with a teacher’s aid; over the length of the experiment 11,600 children were involved. The students were followed for four years and after the third grade were returned to regular-sized classes. The data have been analyzed by a variety of researchers and the results have been remarkably consistent.\(^{23}\) The results suggest that: (1) students who were initially placed in a small class scored about 0.2 standard deviations higher on test scores in grades K-3; (2) after all students returned to normal-size classes, the advantage for those who were assigned to small classes faded to about 0.10 standard deviation; (3) the gain remained at about 0.10 standard deviation through high school; (4) students who were assigned to a small class were more likely to take the ACT or SAT college entrance exam, and scored about 0.10 standard deviation higher on the exam; (5) students assigned to small classes were less likely to be arrested or convicted of a crime; and (6) gains were much higher for

\(^{22}\) Other recent papers on the effect of class size on student achievement which use “quasi-experimental” designs include Angrist and Lavy (1999), who use the non-linearity in class size determination in Israel to identify an effect of class size and find effects on the same order of magnitude as those reported here by Krueger (1999), and Hoxby (2000b) who exploits variation in the size of the school-aged population in Connecticut to identify an effect of class size and finds that smaller class sizes have no effect on student achievement.

\(^{23}\) See Word, et al. (1989), Finn and Achilles (1990), and Folger and Breda (1989), Krueger (1999), and Krueger and Whitmore (2001a,b).
African American students and those on free or reduced price lunch.

Although the results from Project STAR suggest there may be benefits to reducing class sizes, there are also costs — which can be considerable as additional teachers must be hired and classrooms built. Krueger (2000a) attempts to quantify the costs and benefits from class size reduction in the early grades, employing various assumptions about the increased costs as well as the relationship between class size, test scores, and future wages; the age-earnings profile of an average student; and the discount rate. Assuming that productivity grows by 1% per year, the internal rate of return from reducing classes by 7 students in grades K-3 is about 6%. Alternatively, the minimum gain in test scores would have to be at least 0.10 standard deviation units (assuming a discount rate of 4%) for the program benefits to balance costs. Although this calculation suggests that the benefits of class size reduction may balance the costs, the question remains whether this relatively expensive intervention is the most efficient use of public funds to improve education.

2.3.6. Technology

Information technology (IT) is becoming increasingly important in the American job market. In 1997, over half of all workers directly used a computer keyboard on the job. Workers who use a computer in their daily routine are paid more than those who do not, and are more highly sought after by employers (Krueger, 1993; Holzer, 1996; and Autor, Katz and Krueger, 1998). At the beginning of the decade, 52% of students reported using a computer in school, although the percentages differed by race with 54% of Whites reporting using a computer compared to only 39% of Blacks and 41% of Hispanics (Krueger, 2000). And, a recent report by the Department of Education documents that in 1994 only 35%
of all public schools had access to the Internet and that only 3% of classrooms had Internet access (Cattagni and Farris, 2001). Further, there was unequal access to IT in education as rural schools and those that served a high proportion of minority or low-income students had less computer equipment than did schools in suburban and more affluent areas. Thus, in the early part of the decade there was a digital divide in elementary and secondary schools.

Concern that IT literacy had become one of the “new basics” — as important as reading, writing, and arithmetic -- was one of the motivations for the Clinton Administration’s focus on technology in education. The Administration also feared that without a national effort to encourage investment in computers, the existing inequities in access to computers in schools would continue to grow and that this would become yet another force driving increasing inequality in the labor market. The assumption underlying this strategy is that technology can help to improve student achievement, an assumption to which we return below.

The Administration had four main policies to promote the use of technology at the K-12 level. The first, and by far the biggest, was known as the “E-rate.” For more than 60 years prior to 1996, person-to-person voice communication through telephones was provided to high cost (such as rural) areas and low-income users through a set of subsidies known as “Universal Service.” For example, urban areas (with lower costs of provision) subsidized rural areas; wealthier users subsidized low-income users; and commercial users subsidized residential users. In the 1996 Telecommunications Act, Universal Service was expanded to also include new advanced telecommunications, such as enhanced phone and computer networks that would allow users access to the Internet. The new Universal Service Order implementing this expanded definition provides up to $2.25 billion annually to provide schools and libraries with
discounts, referred to as the “E-rate” for services beginning in January of 1998. The discounts are allotted on a sliding scale from 20%-90% (with the poorest schools (and libraries) receiving the maximum discount). This program has been fairly controversial. Because the major long-distance telephone companies started to itemize the Universal Service on phone bills, it became known as the “Gore Tax.” Further, there have been legal challenges over specific design elements of the program, such as whether it would cover internal wiring of the schools in addition to the Internet access.

At face value, it would appear that the E-rate program has succeeded in expanding Internet access (Puma, Chaplin, and Pape, 2000). By the third year of the program (December 2000), approximately $1.8 billion dollars were allocated to schools and districts, funding over 20,000 applicants. Thirty-percent of the subsidies went to the poorest schools and districts (Universal Service Administrative Company, 2001). Further, by the year 2000, 98% of schools had access to the Internet; 77% of classrooms had Internet access. The gap between suburban and rural and between low-income and high-income schools had closed substantially (Cattagni and Ferris, 2001). Despite these gains, it is difficult to isolate the specific impact of the E-rate on this growth in IT in elementary and secondary schools from the growth that would have occurred in its absence.

Other Administration programs to increase and improve IT in schools include the “Technology Literacy Challenge Fund” which distributes funds on a formula basis to help states invest in education technology; “Preparing Tomorrow’s Teachers to Use Technology” (known as “PT3”) which attempts to train new teachers in the use of technology; and the “Technology Innovation Challenge Grants,” which are competitive grants to states also designed to promote innovation in the use of technology. These programs are in addition to “bully pupil” initiatives such as promoting private and volunteer efforts (such as “Net
In the late 1970s, a study described in Ragosta, Holland and Jamison (1982) used randomized assignment. However, the study was based on a small sample (usually fewer than 200 students in the treatment and control groups), and the technology is now dated. As a result, it is unclear whether the results apply to students today.

The most important question for these policies is whether technology actually makes a difference for student achievement. Surprisingly, there is little compelling evidence that it does. In part, the problem arises because technology changes so quickly. Different studies evaluate different hardware and software products, and by the time the study is completed the technology is often obsolete. In addition, virtually all studies of computers and student learning are based on observational data. A common problem with studies based on observational data is that it is virtually impossible to control adequately for all the factors that affect student achievement and that might be correlated with the use of computers. As with other education policies, randomized, controlled experiments would overcome this problem.

Angrist and Lavy (1999) devote a good deal of attention to potential spurious factors that might be correlated with the prevalence of computer use and student achievement using data from a program in Israel called “Tomorrow-98.” Angrist and Lavy conclude: “The results reported here do not support the view that [computer-aided instruction (CAI)] improves learning, at least as measured by pupil test scores. Using a variety of estimation strategies, we find a consistently negative relationship between the program-induced use of computers and fourth grade math scores.” It is unclear, however, whether the bleak results for Israel apply to American students, and to the instructional software packages that are commonly used in American schools.

A widely publicized large-scale study of the impact of computer use on the academic achievement

---

24 In the late 1970s, a study described in Ragosta, Holland and Jamison (1982) used randomized assignment. However, the study was based on a small sample (usually fewer than 200 students in the treatment and control groups), and the technology is now dated. As a result, it is unclear whether the results apply to students today.
of American students conducted by Wenglinsky (1998) found contrary results. Wenglinsky modeled students’ tests scores on the fourth and eighth grade NAEP Mathematics exam as a function of their frequency of computer use in school, type of computer application, class size, socio-economic status, and teachers’ characteristics. The findings are mixed. Students who reported using a computer more frequently tended to score lower on the NAEP exam. But some particular uses of computers had a positive effect on test scores in his estimates. Computer use for applications and simulations was positively associated with test scores, whereas use of computers for drills and practice was negatively associated with test scores. A major concern with these results is that they may spuriously reflect a tendency for teachers to use more basic applications when they have weaker students in their class, rather than reflect any direct effect of the technology.

Finally, several meta-analyses on the effect of computer use on student achievement have been conducted. These studies try to synthesize the underlying estimates in the literature. The meta-analyses tend to find that computer use is positively associated with student achievement. For example, Kulik and Kulik (1991) collected 254 past controlled studies of the effectiveness of computer-based instruction (CBI), and concluded that, “In 202 (81%) of the studies, the students in the CBI class had the higher examination average; in 46 (19%) of the studies, the students in the conventionally taught class had the higher average.” Of course, a meta-analysis can only be as convincing as the combined strength of the underlying studies in the literature. If, as in the case of computer use, reverse causality is a problem (e.g., more advantaged students tend to use computers), then a meta-analysis is unlikely to be very informative

25See Cuban and Kirkpatrick (1998) for a summary of the meta-analyses on this topic, and several individual studies.
unless the underlying studies have dealt adequately with the reverse causality problem (which most have not). After reviewing several meta-analyses, single studies, and critical reviews, Cuban and Kirkpatrick (1998) conclude, “we are unable to ascertain whether computers in classrooms have in fact been or will be the boom they have promised to be.”

We believe that a fair reading of the evidence is that CAI, when done correctly, can probably help reinforce traditional classroom learning. But the curriculum has to be tailored to the student with clear goals in mind, and CAI may be ineffective, or perhaps harmful, if done incorrectly. A set of randomized studies would go a long way to answering whether CAI works, what modes works, and for whom it works.

2.4. Post-secondary Education

The Clinton Administration’s policies in higher education were motivated by three economic trends, and a desire to cut taxes. The first trend was the increasing income inequality in the U.S. which was driven in large part by the declining wages of those with only a high school degree, as earlier. The second was increasing college tuition. College tuition has been increasing steadily since the early 1980s, jumping by over 50% between 1980 and 1990.

Finally, the Administration was concerned that the existing intergenerational mobility would slow because post-secondary enrollment varied by family income. Figure 2.2 is from an article by David Ellwood and Thomas Kane. The figure shows the percentage of students from the high school class of 1992 who enrolled in a postsecondary institution within twenty months of graduation by family income quartile and math test score tertile. Within each of the test score tertiles the percentage of students enrolling in higher education increases with parental income. Such a pattern of enrollment may be explained by
several factors, such as differences in college preparedness not captured by test scores, information about college and financial aid, and the existence of credit constraints. The explanation is important since it should affect policy.

The first explanation suggests a policy of focusing more on K-12 education. The second is an information deficiency that could be addressed through informational campaigns or mentoring programs for youth.\textsuperscript{26} The third potential explanation, credit constraints, arises because more affluent students can finance post-secondary education by drawing on family wealth while lower-income students may need to borrow. Since students are unable to offer their future earnings as collateral to secure a loan on the private market, the cost of borrowing may exceed the expected return to attending college. If credit constraints are important, then policies to either lower the cost of higher education or to decrease the cost of borrowing are appropriate.

Heckman and Lochner (2000) argue that college preparedness is the dominant force driving the differences in college attendance by family income, and that it swamps any potential borrowing constraints faced by families during the college-going years. In contrast, Ellwood and Kane (2000) offer evidence consistent with the existence of borrowing constraints (as illustrated in Figure 2.2). And, a wide array of evidence from outside of education suggests that many people, particularly those close to college age, are credit constrained. For example, Warner and Pleeter (2001) find that, when offered the choice between an annuity and lump sum bonus as a separation payment, the vast majority of members of the Armed Forces selected the lump sum; the discount rate that would justify their decision typically exceeded 20

\textsuperscript{26} GEAR-UP, which funds partnerships between high-poverty middle schools, colleges and universities, community organizations, and businesses, is one such program.
percent. Additional evidence comes from credit card usage. Gross and Souleles (2000), for example, find that well over one-half of households with at least one credit card regularly roll over debt, with the median revolving account equal to about $7,000. Interest rates run around 15 percent. They also find that when credit limits are increased, there is an immediate and significant rise in credit card debt, especially for those who were already close to maxing out their cards. In addition, many families pay college tuition bills with credit cards, and roll over the resulting debt.

In fact, one could characterize the Administration’s policy towards higher education as attempting to address all three potential explanations the pattern in Figure 2.2.

2.4.1. Expansion of Pell Grants

Created in 1973, the Pell Grant program provides grants to low-income students who have yet to complete a bachelor’s degree so they can attend a post-secondary institution. It is the federal government’s primary means-tested grant program in higher education. A student’s grant is calculated as the maximum Pell Grant minus the expected family contribution (largely determined by income and assets). The maximum Pell Grant in 1993 (in 1993 dollars) was $2,300; by 2000 it had increased to $3,300 (in 2000 dollars) (Budget of the United States, 2001). In *The Price of Admission: Rethinking How Americans Pay for College*, Kane explains that while Pell Grants lower the cost of attending college, they have little effect on the marginal cost of attending a more or less expensive college among those who would attend college in the absence of the program. There is little effect because tuition is usually not a factor in calculating the

27 The Administration also expanded the Supplemental Educational Opportunity Grants (SEOG) which provide grants up to $4,000 to low-income students.
grant amount. In theory Pell Grants should, however, have an effect on students who are on the margin of attending college. The empirical evidence on the effect of Pell Grants on college attendance is relatively sparse. For example, when looking for changes in enrollment among low-income youth before and after the introduction of the Pell Grant, Kane (1999) finds no effect on attendance. In contrast, researchers who have attempted to study the effect of college cost on enrollment tend to find that a $1,000 decrease in net price is associated with a 3-5 percentage point increase in attendance (see, for example, Leslie and Brinkman (1998) and Kane (1994)) with most of that accounted for by the enrollment response of students attending two-year colleges (Rouse, 1994).

Because this could not be claimed as a “new Clinton initiative,” increases in Pell Grants were never a front-line initiative of the Administration and they paled in comparison to the new education tax credits (discussed below) which primarily benefitted middle-income students.

2.4.2. Student Loan Reform

Federal student loans comprise the largest share of federal aid to postsecondary students -- about $21 billion in new loans were made to 3.5 million students in 1999 (Smith 1999). Under the Guaranteed Student Loan (GSL) program (formally renamed the Federal Family Education Loan Program in the 1992 Amendments to the Higher Education Act (HEA)\(^{28}\)), loans are made through private companies, although the government ensures the lenders a return that covers the cost of providing the loans as well as a profit. As Rep. Bill Goodling summarizes, “...federal student loans were made and serviced by the private sector

\(^{28}\) Despite the name change, we will refer to federally subsidized student loans as the more familiar “GSL” both before and after the 1992 reauthorization.
but were guaranteed and subsidized by the federal government.” (Goodling, 1994) And yet throughout the 1980s and early 1990s there were signs that the program was in trouble. As noted earlier, default rates were unacceptably high in some sectors of higher education; and a General Accounting Office report concluded that the GSL program was “vulnerable to waste, fraud, abuse and mismanagement.” (Kunin, 1994) Although proposals to reform the federal student loan system had been floating around Washington for years -- including consideration of direct lending by the Bush Administration for the 1992 reauthorization of the HEA -- little had been accomplished.

During the 1992 presidential campaign, Clinton pledged that in order “[to] give every American the right to borrow money for college, we will scrap the existing student loan program and establish a National Service Trust Fund. Those who borrow from the fund will be able to choose how to repay the balance: either as a small percentage of their earnings over time, or by serving their communities for one or two years....” (Clinton, 1992, emphasis added). The idea was that students should not have a disincentive from taking low-paying community service-oriented jobs out of a need to re-pay their student loans and that individuals who complete national service should receive some reward. This pledge resonated with Americans who felt that more should be done to encourage national service and who were seeking ways to pay for rising college tuition. And, this pledge was among those that Clinton kept. The National Service Trust Act of 1993 created AmeriCorps which provides volunteers with an educational award to help pay for post-secondary education or to pay off student loans. And, that same year the Student Loan Reform Act was passed.
The centerpiece of the Student Loan Reform Act is the creation of the Direct Loan program. The idea was to reform the GSL program to “work better and cost less” and with those cost savings subsidize the national service corps as well as alternative forms of loan repayment (such as income-contingent loans). Through the Direct Loan program, funds are provided to schools directly who, in turn, make loans to students. As a result, the financial intermediaries in the existing GSL program (the lenders, secondary markets, and guaranty agencies) play no role. The Department of Education estimates that the program has thus far saved the federal government $6 billion (U.S. Department of Education, 2000a).

The Direct Loan program benefits students because it can provide students with more flexible repayment options and loans at lower cost. Under the program, students have the option of the standard 10-year repayment period, graduated repayment (smaller payments at the beginning of the repayment period and increasing over time), extended repayment (smaller payments extended over more than 10 years), income-contingent repayment, or a combination of these alternatives (Ford, 1994). The cost savings derive from the fact that the federal government’s cost of funds is less than that of the private sector, the federal government does not need to receive a profit in order to have an incentive to provide student loans, and from increased competition in the market for student loans (Ford, 1994). In fact, although the program has never been fully implemented, many observers agree that the increased competition (due to the lower cost loans offered by the federal government) is one of its most important results. An evaluation of the program in 1999 concluded, “Virtually no one disputes that the operation of an alternative loan

29It is widely accepted that direct lending could not have been enacted had it not been for the Credit Reform Act of 1990 which changed the way in which loans were scored. Direct lending is substantially less costly under the new rules than under the old. The fact that the cost savings are a result of a change in scoring method is one of the controversial aspects of the Direct Lending program.
program has produced a competition that inspired innovation and service -- to the benefit of all borrowers and schools.”³⁰ (Cited in Marshall 1999). The Department of Education estimates that the students have saved $9 billion in interest and fees to date (U.S. Department of Education, 2000a).

Student loan reform may be one of the more significant unsung accomplishments of the Clinton Administration. It injected competition into a market that by many accounts had become uncompetitive while also giving students greater options and attempting to reform a large government program. Whether these changes actually encouraged the marginal student to attend college is, however, unclear.

2.4.3. Education Tax Credits

The newest and perhaps most controversial of the Administration’s policies in higher education was the creation of new education tax credits. Available since 1998, the Hope Scholarship is a nonrefundable $1,500 tax credit for the first two years of college for tuition and fees (less grant aid). It is phased out for joint filers between $80,000 and $100,000 of income and for single filers between $40,000 and $50,000 of income. The credit can be claimed in two taxable years on an individual basis (for students enrolled on at least a half-time basis) and cannot be claimed after the student completes the first two years of college.

As President Clinton was often heard declaring when proposing the Hope Scholarship in 1996, “...our goal must be nothing less than to make the 13th and 14th years of education as universal to all Americans as the

³⁰ In addition, a senior executive from a bank providing GSLs reported, “[Direct Loans] have introduced some ways of doing business and some delivery mechanisms that made the private enterprise wake up a little bit. To be perfectly honest, as a private enterprise we thought we were doing almost an A-plus job. When we stepped back a little bit, we saw some of the things that the Department of Education was doing and we realized we weren’t... It’s been relatively good for the industry, particularly for the recipients in terms of students and schools.” (cited in Marshall 1999)
These credits were enacted under the Taxpayer Relief Act of 1997. Other tax benefits for higher education in that Act include (among others) a deduction for interest paid on student loans, penalty-free withdrawal from Individual Retirement Accounts (IRAs) for education purposes, and an expansion of education IRAs.

A second credit, the Lifetime Learning Tax Credit (available since 1999), allows college juniors and seniors, graduate students, and workers enrolled to upgrade their skills a 20% tax credit for the first $5,000 of tuition and fees (less grant aid) through 2002 and for the first $10,000 thereafter. It is available on a per-family basis and phased out at the same levels as the Hope Scholarship. And, although not as large as the Hope Scholarship, in 2000 it was budgeted at almost $3 billion. The credit was motivated by the concern that in the “new economy” in which the skill demands of the labor force change rapidly, workers need to engage in a “lifetime” of learning.  

These credits are opposed by those in the higher education establishment because they set up an entirely new system of financial aid that is disconnected from the existing system and bring in new complexity to the financial aid system with the introduction of a new regulator (the Internal Revenue Service). Further, observers argue that public institutions with tuition levels below the financial aid limits have an incentive to raise tuition with little effect on college cost for low-income students but with a shift in the subsidy from the state to the federal government (see, e.g., Kane (1999) and Wolanin (2001)). And

31 These credits were enacted under the Taxpayer Relief Act of 1997. Other tax benefits for higher education in that Act include (among others) a deduction for interest paid on student loans, penalty-free withdrawal from Individual Retirement Accounts (IRAs) for education purposes, and an expansion of education IRAs.
public finance economists decry the complexity the tax credits add to an already complicated tax code.

Another important policy question is the extent to which these scholarships (particularly the Hope Scholarship) encourage students to attend college who otherwise would not have done so. Dynarski (2000) analyses the enrollment effects of Georgia’s HOPE (Helping Outstanding Pupils Educationally) Scholarship program, the model and namesake for the federal Hope Scholarship tax credit. Through this program state residents with at least a B average in high school can attend Georgia’s public colleges for free. Dynarski estimates that Georgia’s HOPE scholarship has a sizeable impact on the college attendance of 18 and 19 year olds. However, only 20% of the college attendance after the introduction of the HOPE scholarship appears to be induced by the scholarship. Thus, 80% of the scholarships go to students who would have gone to college even in the absence of the program.32

Finally, it is important to note that while Pell Grants are targeted to low-income students, the Hope Scholarship and Lifetime Learning Tax Credit are not. Four features of the credits limit their usefulness for low-income families: (1) they are not refundable (such that those with no tax liability receive no benefit from the program); (2) the amount of the tuition and fees that can be counted towards the tax credits is reduced by the amount of tax-free educational assistance received by the student (including Pell grants); (3) only tuition and fees can be included rather than the full cost of college attendance (which also includes room, board, books, and transportation); and (4) the credits are available several months after the tuition payments have been made (Wolanin 2001). Figure 2.3 shows the distribution of tax credits by taxpayer

32 These estimates are similar to those by Cameron and Heckman (1999) who, based on a simulation, forecast that over 90% of the expenditure of the Hope Scholarship would go to students who would have enrolled in college in the absence of the program.
income for 1998. Only about 12% of the tax credits go to taxpayers with an adjusted gross income of less than $20,000. Almost 50% go to those with incomes greater than $50,000. This pattern has led some analysts to be concerned that such tax credits may actually serve to widen the gap in post-secondary enrollment between low- and upper-income families. For example, Dynarski finds that Georgia’s HOPE scholarship program had widened the gap in college attendance between low- and high-income families, and between African Americans and Whites.

Why did the Administration elect to focus on tax credits rather than increases in Pell Grants? Because they were largely motivated by providing tax relief to middle-income families and the goal was immensely popular among the public. After all, they expected that it would not help low-income students to attend college. As David A. Longanecker, Assistant Secretary for Postsecondary Education, said in 1997, “Most lower-income families will not benefit from the tax credit.” (Wolanin 2001). Rather it was designed to counter the across-the-board and capital gains tax cuts proposed by Senator Dole in 1996 (Wolanin 2001). And although most observers do not believe that the credits make economic sense (at least if motivated by concerns about college access), it appears that the Bush Administration is continuing and expanding them.

2.5. Discussion

Former Clinton advisor Dick Morris writes, the “...idea for tax deductions for college tuition had resonated deeply with the public at a visceral level, with 55 percent saying they strongly support it and another 25 percent somewhat support it, far better numbers than any other tax-cut proposal we’d tested....” (Morris, 1997)

For example, the new tax cut legislation signed by President Bush expands the Lifetime Learning Tax Credit, Education IRAs, and student loan interest reduction.
Figure 2.4 shows the federal budget for education in 1993 and 2000. In addition to the budget from the Department of Education, we have also included the appropriations for Head Start, the E-rate, the Student Loan Interest Deduction, and the Hope Scholarship and Lifetime Learning Tax Credits. Overall, federal education spending increased by about 30%.\textsuperscript{35} There was an increase in the Department of Education’s spending at the K-12 level due to increases in special education, Title I of the ESEA, and the Class Size Reduction program. Simultaneously, there was a decrease in the Department’s budget at the post-secondary level arising from the savings from student loan reform. Note, however, that overall appropriations to the Department of Education were relatively constant. Thus, the Clinton Administration increased the federal investment in education through non-traditional educational programs such as the E-rate and the tax code.

Overall, throughout his eight years in office President Clinton helped to solidified the federal role in education. He made the federal government’s contribution to elementary and secondary education more complementary to efforts by state and local governments, and student loan reform at the post-secondary level brought savings and flexibility to students and taxpayers. And, he promoted education in non-traditional ways, such as through the tax code. Although larger, the federal role, nevertheless, remains small compared to those of state and local governments.\textsuperscript{36}

3. Broad Overview of Labor Department Policy

\textsuperscript{35} We note that there are other education programs throughout the federal government that are not included in these figures.

\textsuperscript{36} One missed opportunity for the federal government that the Administration did not emphasize is the promotion and dissemination of high quality research in education.
To provide an overview of the size of the Department of Labor, Figure 3.1 reports the
Department’s budget outlays in constant 2000 dollars from 1962 through 2000. The figure indicates that
DOL’s budget fluctuated between $14 and $20 billion in the 1960s, increased by approximately three-fold
to a peak of $67 billion in 1976, fell by almost half in the 1980s, spiked up during the recession of the early
1990s, and returned to its late 1980s level by the end of the 1990s. The Department’s outlays clearly
reflect a counter cyclical pattern, typically peaking a year after the trough of a recession. The correlation
between year-over-year changes in the Department’s real outlays and changes in the unemployment rate
is 0.62. The counter-cyclical pattern is largely driven by spending on Unemployment Insurance benefits,
which naturally rise during a recession, and currently comprise around 70 percent of the Department’s
budget.

Figure 3.2 displays DOL’s budget as a percent of overall federal budget outlays. Abstracting from
cyclical ups and downs, this figure shows that DOL’s budget fell gradually relative to the overall Federal
government in the 1960s, grew sharply in the 1970s, and declined in the 1980s and 1990s. By 2000,
DOL’s share of the federal budget fell below 1.8 percent, its lowest level in over four decades. The Bush
Administration’s initial budget proposal cuts the DOL budget further, reducing discretionary spending
(mainly job training) by $600 million in 2002.

The budget gives a crude picture of the scale and scope of government activity, especially if
regulatory functions – which tend to require low government expenditures but can have a profound effect
on the economy – are involved. An alternative measure is the number of employees involved with particular
functions. Table 3.1, taken from Krueger (2000b), summarizes the allotment of DOL employees across
various agencies over the last 40 years. The selected years conveniently correspond to business cycle
peaks as well as ending years of decades. The bottom part of the table shows employment grouped into four broad functions, based on the mission of the agencies. Employment from currently defunct agencies were categorized into the succeeding agencies, although in some cases this is difficult. Nonetheless, several shifts in the general direction of policy are evident from the table. In 1959 the Labor Department employed 5,476 employees; that number doubled in the 1960s, and doubled again in the 1970s to more than 21,000 employees. The increase in employment coincided with an increase in the regulatory functions performed by the Department in the 1960s and 1970s. Employment at the Department fell by 20 percent during the 1980s, and by another 7 percent in the 1990s. Per 10,000 employees in the private, nonfarm workforce, DOL employed 1.2 workers in 1959, 2.9 in 1979, and 1.8 in 1999.

Much of the decline in DOL employment since the 1970s was associated with a decline in training activities. In 1969, 37 percent of DOL employees were assigned to the Manpower Administration, the predecessor to the Employment and Training Administration (ETA), which is responsible for job training and administering the UI system. By 1999, ETA employment declined to just 8 percent of the Department’s total employment. The number of workers employed by ETA fell by half between 1979 and 1989. The training budget declined substantially since the 1970s as well. In constant 1999 dollars, spending on training and employment services exceeded $12 billion in 1979 and was only $4.8 billion in 1989. Although job training was a stated priority of the Clinton Administration, training and employment services increased by just 2 percent between 1992 and 1999. Available data also suggest that the

37 For example, in 1969 it was probably the case that many of the functions of the Office for Administration and Management were handled by the Secretary’s office.

38 The 1979 data are from DOL’s Annual Reports. The post-1980 data are from “Historical Summary of Actual Budget Authority” provided by DOL. The figures pertain to “Training and Employment
decline in federal funding for job training in the early 1980s was not made up by an increase in state funding. In 1999, state spending on employer-centered job training (both incumbent workers and new hires) was $593 million, just 11 percent of the total federal expenditures. At this level of expenditures, it is unlikely that any state increase would have offset the nearly $8 billion decline in federal expenditures in the early 1980s.\textsuperscript{39} Section 3.2 provides a more detailed analysis of developments in federal job training in the 1990s.

Table 3.1 further indicates that regulatory activities grew while training programs declined. Between 1969 and 1979, the share of DOL employees in agencies engaged in some type of regulatory function increased from 33 percent to 59 percent. Put another way, the number of employees devoted to regulatory activities nearly quadrupled between 1969 and 1979. The advent of the Occupational Safety and Health Act (1970) and transfer of mine safety regulation to the Department of Labor from the Interior Department in 1977 accounted for 70 percent of the increase, and the expansion of other regulatory agencies such as Office of Federal Contract Compliance Programs (OFCCP) accounted for the remainder.

The expansion of labor market regulatory activities in the Nixon Presidency stands out as one of the major changes in labor policy since the 1960s. The trend toward enacting legislation that regulated more aspects of the labor market continued in the 1980s and 1990s. Examples of such legislation include: the Age Discrimination in Employment Act, which prohibited discrimination against those over 40 years old.

\textsuperscript{39}State expenditures on job training are available from Duscha and Graves (1999). States operate many different types of programs. For Texas, for example, their figures include expenditures on the Smart Jobs Fund for direct grants to companies and the Skills Development Fund for customized training through community colleges or vocational schools. From 1989 to 1999, state job training expenditures increased by 21 percent, after adjusting for changes in the CPI. Data for earlier years are unavailable.
in 1967 and abolished mandatory retirement in most occupations in the 1980s; the Americans with Disabilities Act (ADA), which added individuals with disabilities to the groups protected by Title VII of the Civil Rights Act in 1990; the WARN Act, which required employers to give two months of advance notification prior to a mass layoffs or plant closing; and the Family and Medical Leave Act -- the first bill signed by President Clinton -- which mandates unpaid leave in the event of certain medical emergencies. In addition, increasing numbers of employers became covered by existing regulations as a consequence of reductions in the minimum size of covered establishments under many standards, and the elimination of many employer exemptions.

Table 3.2 summarizes the main labor legislation and Executive Branch initiatives begun in the 1990s. By and large, the initiatives continue the past trend of increased labor market regulation. In addition, a new model, based on greater worker choice, was initiated for federal job training. In the remainder of this section we describe the political, intellectual and economic forces that led to the major labor policy thrusts of the 1990s, and relevant research bearing on the impacts of the policy initiatives.

3.1. Family and Medical Leave Act

When he signed the *Family and Medical Leave Act* (FMLA) in February 1993, President Clinton said, “I believe that this legislation is a response to a compelling need - the need of the American family for flexibility in the workplace. American workers will no longer have to choose between the job they need and the family they love.”

Support for FMLA had existed in Congress for some time. The FMLA permits covered workers to take up to 12 weeks of unpaid, job-protected leave in a 12 month period for specified medical and
family reasons, such as the birth of a child or a seriously ill relative. The changing characteristics of the workforce -- in particular, the steady rise in employment of women, who tend to be care givers, and the increase in the number of workers with elderly parents – are probably the main driving forces behind public support for the FMLA. About two-thirds of the U.S. labor force works in a firm that is covered by FMLA, and about one-half of workers also meet the FMLA’s requirement in terms of length of service and hours.

Relatively little research has been done on the effects or use of FMLA. The most comprehensive analysis of FMLA is contained in the Commission on Leave’s Congressionally-mandated report, *A Workable Balance*, released in 1996. This study commissioned two surveys in 1995, one of employers and one of employees to assess views toward FMLA. Although it is difficult to assess the impact of the FMLA, the Commission found that 16.8 percent of all employees took leave for a reason covered by the FMLA, and about 1.2 percent of all workers said they took an FMLA leave in the preceding 18 months. This is a low utilization rate, and it is possible that leave would have been taken in many of these cases without the FMLA. Almost ninety percent of covered employers knew they were covered by the Act, while only 58 percent of employees at covered worksites had heard of the Act. The vast majority of employers also said that compliance with FMLA entails no costs or only small costs. The survey was done shortly after FMLA was enacted, and it is possible that utilization and costs have increased since then. Nevertheless, the Commission found widespread support among workers for the view that “every employee should be able to have up to 12 weeks of unpaid leave in a year from work for family and medical problems.” In addition, the Commission found that 40 percent of employees think they will have need to take a leave for an FMLA reason some time in the next five years.
In a competitive labor market, employees should pay for the option of taking unpaid leave through a lower salary. If employees value leave at the cost it takes employers to provide it, then wages would fall by that cost. If constraints or frictions prevent wages from adjusting, then one would expect mandated leave to cause employment to decline. If employees do not value mandated leave rights, then FMLA would be equivalent to a tax on employers, which would result in lower pay and employment. Because the likelihood of employees taking leave is small, however, the wage and employment responses would probably be small as well. Moreover, from society’s perspective, protected leave for medical emergencies and family reasons could be desirable, as caring for a sick child, parent, newborn, or nursing oneself back to health, can have benefits to society at large that are not taken into account in individual decisions over leave.

Ruhm and Teague (1997) provide a longitudinal analysis of the effect of leave entitlements on GDP, the employment-to-population rate, and unemployment rate using data for 17 countries during the 1960-89 period. They conclude, “The econometric estimates provide little support for the view that moderate periods of parental leave reduce economic efficiency but rather hint at a modest beneficial impact, particularly when considering paid time off work.” In the U.S. it is likely that the effect of leave policies are so small as to not noticeably influence macroeconomic outcomes; there still may be effects, however, on microeconomic outcomes such as pay for certain subsets of affected workers.

3.2. Job Training

Federal job training undergoes a major reform about once a decade. In 1962, the Kennedy Administration introduced the *Manpower Development and Training Act* (MDTA), which provided
training for unemployed and underemployed workers, and created public service employment jobs. The Comprehensive Employment and Training Act (CETA), passed in 1973, continued this mission. In 1983, CETA was replaced by the Job Training and Partnership Act (JTPA), which delegated discretion over the choice and oversight of training providers to local Private Industry Councils (PICs), and did away with public service employment. In 1998 JTPA was replaced by the Workforce Investment Act (WIA).

Even before WIA took effect, however, major changes in the allocation of the job training budget took place in the 1990s.

As preparation for seeking reforms in job training, in 1994 and early 1995 DOL’s Office of the Chief Economist prepared a 71-page report entitled, What’s Working (and what’s not): A Summary of Research on the Economic Impacts of Employment and Training Programs. The effects of job training on participants’ employment and earnings have been thoroughly studied by economists, often with the benefit of randomized assignment of subjects into participant and control groups. Although possible general equilibrium effects of training and long-term effects on participants (especially youth) are not well understood, a great deal of progress has been made in this field.\(^{40}\) The What’s Working report summarized and synthesized much of the available literature on employment and training, relying heavily on Bloom, et al.’s (1994) analysis of the National JTPA Study, and earlier studies of the Job Corps, CETA, and summer youth employment programs. The main conclusions of the report can be summarized as follows:

- For disadvantaged out-of-school youth, relatively short-term training programs such as JTPA IIC

\(^{40}\)Heckman, LaLonde and Smith (1999) provide a comprehensive overview of the literature. LaLonde (1995) provides a less technical summary.
have been found to be unsuccessful in raising participants’ employment and earnings.

- The residential, high intensity Job Corp programs has had a positive effect on participants’ future earnings and propensity to commit crime; Mallar’s (1982) benefit-cost analysis suggests that the benefits outweigh the costs by 45 percent.

- The traditional school program produces returns for disadvantaged students. Effective strategies to prevent students from dropping out of school would have a high payoff.

- The Summer Youth Employment and Training Program increases the likelihood that participants are employed during the summer months, and does not appear to displace other potential workers.

- Contextual training, where skills are taught in the context of a particular job, appears to be more successful.

- For disadvantaged male adults, those who participated in JTPA earned about 10 percent more than those in the control group who did not participate. For disadvantaged female adults, JTPA participants earned about 15 percent more than control group members. “The total additional earnings of participants were about 50 percent greater than the total additional costs expended on that group compared to the control group,” with 2.5 years, and probably larger over a longer time horizon.

- Job search assistance produces benefits for all groups that have participated in the program.

- “Both successes and failures among training programs have been common. This argues against a ‘one-size fits all’ approach and for an attempt to make a wide variety of choices available to those who need to upgrade their skills.”

Jodie Allen described the What’s Working report as “an honest report and many of the findings are honestly disappointing though not surprising.”

The conclusions of the What’s Working report were consistent with other, independent studies. For example, LaLonde (1995) argued: “JTPA dollars are misallocated to the extent that sites must deny services to eligible adult women to reserve some of their

---

funds for adult men and especially for youths” and “because Job Corps appears to be the only program that benefits disadvantaged youths, it would make sense to allocate more JTPA funds to this program.”

To some extent, training funds moved in the direction suggested by the research findings. Table 3.3 summarizes DOL’s training budget authority from 1989 to 1999, in constant 1999 dollars. It is difficult to compare the figures by recipient group over the full 1990s because separate JTPA figures for youth and adult training are only available beginning in 1993.

The various youth training programs, and the Summer Youth Employment Program (which is not really a training program), are highlighted in bold. Notice first that JTPA Youth Training Grants were eviscerated in FY 1995, falling from $721 million to $82 million. The program rebounded somewhat in the subsequent years, but still remains a skeleton of its former self. The Summer Youth Employment Program was gutted in 1995, although much of the funds were subsequently added back. In arguing for a cut in Summer Youth Employment, Congressman Kasich cited the What’s Working report as evidence that the program has not been found to have long-term effects, which seems like a lot to ask of a six-week program that is primarily intended to increase employment while youth are out of school. By contrast, expenditures on the Job Corps program increased in nine of the last ten years, although the program is still not nearly large enough to accommodate every eligible youth. These shifts in the relative allocation of the youth training budget are consistent with LaLonde’s recommendations, although the deep cuts in youth programs are more a result of the Republican takeover of Congress than Administration policy.

In 1995, Senator Nancy Kassenbaum (R-KS), chairwoman of the Senate Labor and Human Resources Committee, sought to reduce or eliminate the Job Corps program. The Administration relied primarily on Mallar’s (1982) dated matched-comparisons study and a letter from two-time heavyweight
champ, George Foreman, a Job Corps alumnus, to defend the program. Recent results of Mathematica’s ongoing “National Job Corps Study” suggest that the program was worth fighting for. Mathematica is studying the experiences of 9,409 applicants to the Job Corps between November 1994 and December 1995 who were randomly assigned the program, and another 6,000 applicants who were randomly assigned to a control group. Applicants were surveyed 12, 30, and 48 months after applying to the program; analyses of the first two waves are available. Participants received about 1,000 more hours of education and job training than the control group. Participation in the program raised participants’ weekly earnings by an estimated 11 percent, 2.5 years after they applied to the program. Participants were also about 20 percent less likely to report having been arrested, charged or convicted of a crime, and if convicted, they served less jail time. The residential feature of job corps appears to be critical, as those slated for a nonresidential center were less successful. Overall, the intermediate results of the National Job Corps study appear qualitatively similar to Mallar’s (1982) earlier study.

New youth training initiatives have also begun. As discussed previously, one goal of School-to-Work is to improve the transition to the job market for non-college bound students. In 1999 youth training was partially restored in the form of a new Youth Opportunity Grants program. This program provides funding for training for long-term employment in empowerment zones and other high poverty areas.

The training budget for disadvantaged adults declined over the last six years, while the budget for dislocated workers increased by a greater amount. As a consequence, total spending on adult training increased. Budget figures are not available on adult training by gender. However, data on JTPA-II adult

\[\text{See Burghardt and Sochet (2000).}\]
training participants (economically disadvantaged) indicate that between 1990 and 1997 the fraction of program termitenees who were women steadily increased from 58 to 68 percent, also consistent with the higher percentage earnings payoffs for women from participation. In general, training dollars shifted toward dislocated middle class workers and away from economically disadvantaged male workers. Because there is a paucity of research on the effects of training for dislocated workers, this shift should not be viewed as a response to research findings. Instead, it is probably best viewed as a reflection of the fact that middle class workers vote in higher numbers, experienced stagnant real wage growth in the 1980s and early 1990s, and felt anxious in the aftermath of the 1990-91 recession.

Because job training is also provided by some federal agencies outside DOL and by many other public and private sources, one should be cautious about interpreting the trends shown in Table 3.3 as reflecting shifts in the national training budget. Individuals who are denied access to DOL’s job training programs may gain access to other programs, and the prevalence of such training may have changed over time. Substitution of other programs may be particularly important for youth: Heckman, LaLonde and Smith (1999; Table 5.1), for example, find that 34 percent of male youth and 42 percent of female youth who were randomly denied admission to JTPA nonetheless received some training services. Nonetheless, in looking over the training budget, one is struck by how small the budget is compared to the magnitude of the skills problem. Even with the Clinton Administration’s new tax breaks to promote education and training, the federal effort devoted to upgrading the skills of the workforce is still small.

During the 1992 campaign, President Clinton proposed that every employer be required to spend

---

43See Committee on Ways and Means (2000; Table 15-38a).
1.5 percent of payroll for continuing education and training. The training would be provided to the entire workforce, not just executives. This grandiose objective was a non-starter with Congress, and quickly jettisoned.

Fundamental changes to the structure of the job training system occurred when the *Workforce Investment Act* (WIA) of 1998 was passed. Support for WIA stemmed primarily from: (1) a feeling that there were “too many” job training programs and lines of funding; (2) a desire to have a coordinated employment services delivery system; (3) a desire to give participants more flexibility over their type of training and training provider; and (4) a desire to require more accountability of service providers. The intention to reinvent job training dates back to the 1992 campaign; in *Putting People First* (p. 17), for example, Bill Clinton promised to “streamline the confusing array of publicly-funded training programs.”

The WIA grew out of training bills that were initially proposed by DOL under Secretary Reich. Major changes introduced by the bill are: (1) participants will have Individual Training Accounts (ITA’s) to use to select training services, rather than have JTPA contract with a training provider to which participants are referred; (2) states will have the option of developing a unified plan to implement a number of federal programs; (3) each state, or a group of states, will be authorized to establish regional performance measures, and coordinate services among local areas; (4) the four funding streams under JTPA will be aggregated into three funding streams; (5) training providers will be required to meet performance-based eligibility criteria; (6) states will be subject to a penalty equal to 5 percent of their federal funding if they fail to meet statewide performance goals; (7) states are required to establish one-stop centers which partner with other programs (such as TANF or Trade Adjustment Assistance) to provide
training and other services to adults; (8) Workforce Investment Boards take the place of PICs.

The use of ITA’s, which are not different from training vouchers (although the White House frowned on the use of that word), is a particularly radical departure for federal job training. It is unclear whether participants will chose as wisely as the PICs did, however. Moreover, publicizing information on providers’ job placement rates may not be very helpful to potential participants if social scientists have difficulty inferring causality from such nonexperimental data (unless a great deal of effort is devoted to collecting data on comparison samples). One could question whether the participants and Workforce Investment Boards will have the expertise to evaluate such data. Nonetheless, on general principles, it is hard for economists to argue with providing more choice and information.

The states are responsible for phasing in many aspects of the WIA program. Although WIA is no longer a “new” program, having been in effect for three years, many of the kinks (e.g., forming partnerships) are still being worked out. We suspect that results of earlier research on JTPA are still relevant for evaluating training effects in the new WIA regime, however, because many of the JTPA providers and training services carry over from those that worked under JTPA, and because the group undergoing training seems at least as important for the success of the treatment as the services they receive. This suggests that one should expect moderate returns to the training dollars, on the order of 5 to 12 percent. But, like most legislation, the devil will lie in the details. An important detail is the level of funding for the ITA’s. Secretary Reich’s goal of universal access to training accounts is unlikely to be realized any time soon. Also, if the past pattern holds, we would not be surprised to see another wave of job training reform in a decade or so.
3.3. Minimum Wage

One of the more contentious areas of labor policy in the 1990s involved the minimum wage. During the 1992 campaign, Bill Clinton endorsed increasing the minimum wage to make work pay, and make up for past erosion in the value of the minimum due to inflation. Raising the minimum wage took a backseat when universal health insurance funded by an employer-mandate was under active consideration, but was resurrected primarily by Secretary Reich and Senator Kennedy shortly after it became clear that health care reform was off the table. Secretary Reich sought a higher minimum wage to raise the earnings and living standards of lower wage workers. President Clinton proposed raising the minimum wage (by an unspecified amount) in his 1995 State of the Union Address, in the following passage:

The goal of building the middle class and shrinking the underclass is also why I believe that you should raise the minimum wage. It rewards work. Two and a half million Americans, two and a half million Americans, often women with children, are working out there today for $4.25 an hour. In terms of real buying power, by next year that minimum wage will be at a 40-year low. That's not my idea of how the new economy ought to work.

Now, I've studied the arguments and the evidence for and against a minimum wage increase. I believe the weight of the evidence is that a modest increase does not cost jobs and may even lure people back into the job market. But the most important thing is, you can't make a living on $4.25 an hour, especially if you have children, even with the working families tax cut we passed last year. In the past, the minimum wage has been a bipartisan issue, and I think it should be again. So I want to challenge you to have honest hearings on this, to get together, to find a way to make the minimum wage a living wage.

Of course, conventional economic models would predict that a minimum wage that is set above the market clearing level will cause employment to decline. If the elasticity of demand for labor is less than one, total payroll of low-wage workers would nonetheless rise, as the loss in employment would be more than offset by higher wages, so the minimum wage will still transfer resources to low-wage workers, but at an
A full distributional analysis would take into account any affect of changes in prices (see Card and Krueger, 1995). This effect is likely to be spread throughout the income distribution. This is an example of Okun’s leaky bucket.

The size of the leak in the bucket is a matter of some dispute in the economics profession. (Disclosure: one of the authors of this paper has been a participant in this debate.) First, some theoretical models yield the prediction that minimum wage increases initially lead employment to increase, and then to decrease (e.g., search models). In these models, an appropriately set minimum wage would generate an efficiency gain, and redistribute income from employers to employees. Second -- and more important for policy -- the strength of empirical evidence linking the minimum wage and employment came into question in the early 1990s. The traditional time-series approach to estimating the impact of the minimum wage found that a 10 percent increase in the minimum reduced employment by about 1 percent (see Brown, Gilroy and Kohen, 1983). This relationship fell apart when the experience of the 1980s was included in the sample, however. As Brown (1999, p. 2154) notes, "Time series estimates that centered on an elasticity of -0.10 moved closer to zero in samples that included the 1980s."

Alternative methods of estimating the impact of the minimum wage have yielded ambiguous results as well. Card and Krueger (1994), for example, found that an increase in New Jersey’s minimum wage in 1992 did not appear to cause job loss in fast food restaurants, either when New Jersey as whole was compared to Pennsylvania, or when low-wage restaurants were compared to high-wage (unaffected) restaurants within New Jersey. Card’s (1992a) analysis of California also found that an increase in the minimum wage there in 1988 did not meaningfully affect employment. And probably most convincingly, Card’s (1992b) cross-state analysis of the 1990-91 minimum wage increase, which exploited the fact that

\[44\] A full distributional analysis would take into account any affect of changes in prices (see Card and Krueger, 1995). This effect is likely to be spread throughout the income distribution.
a national minimum wage increase affects different parts of the country differently, also found that employment growth was not slower for teenagers in states that were more likely to have wages boosted by the minimum wage increase than in other states. This research is summarized and extended in Card and Krueger (1995).

These new research findings and politics figured into the Administration’s decision to support a minimum wage increase. For example, Secretary Reich (1997, p. 227) describes a conversation that he had with the President on the issue in which, after several attempts to persuade the President, Reich contended, “New research shows a modest hike won’t cost jobs. New Jersey recently raised its state minimum to $5.05, with no effect on employment. Another study looked at California …” At this point, Reich reports the President cut him short to say, “You can stop lobbying, Bob. I’ll propose it in the State of the Union.”

But the role of research in this area should not be exaggerated. Deeper political forces (e.g., strong public support, support by unions) were also very much at work. There were minimum wage increases prior to the new research findings, so too much credit (or blame, depending on your point of view) should not be attributed to the research. Moreover, in many areas public policy has not changed despite the support of compelling economic research, so the research alone is not sufficient.

In a speech presented at the National Restaurant Association, Speaker of the House Newt Gingrich greeted the President’s endorsement for a higher minimum wage with characteristic combativeness:

The President came up and graciously offered to raise the minimum wage. It was part of a continuing commitment to having no understanding of the free enterprise system. … When you raise the minimum wage, you lay-off black male teenagers more than any other group. This is an objective fact. I mean, the White House has some spurious new evidence that a couple of their friends concocted. But the fact is, every study for a long
period of time says the higher the cost of entry, the more the marginally unemployable will be dispossessed and not have a job.”

Others were less generous. For example, Dick Armey called the new research “unscientific and counterintuitive” and he vowed to fight the minimum wage with “every fiber of my being.” Rep. James Saxton (R-NJ) held a hearing to publicize supposed “revelations” on the Card-Krueger study based on a small, nonrandom sample of data collected by a lobbyist for restaurants, and then wrote an op-ed criticizing the Washington Post for not reporting on his hearing.

The national hourly minimum wage increased from $4.25 to $4.75 on October 1, 1996, and then to $5.15 on September 1, 1997. Many business tax breaks were attached to the minimum wage bill, which was formally called the “Small Business Job Protection Act of 1996.”

Before turning to systematic evidence on the effect of the 1996-97 minimum wage increase, we feel compelled to examine Speaker’s Gingrich prediction concerning black teenage unemployment. Figure 3.3 reports the unemployment rate for teenagers by race and sex in August 1996 and 1998, before and after the minimum wage increases. The figure shows a sharp decline in the unemployment rate for black male teenagers and black female teenagers. Of course, cyclical factors have contributed to the improved employment situation for black teenagers, but so much for objective facts. (We also note that conventional economic theory makes an unambiguous prediction about employment, not unemployment, when it comes to the minimum wage.)

Bernstein and Schmitt (1997) have carefully re-estimated four models that had been previously used to examine the effect of the minimum wage on employment. These included the approach in Card (1992b) and Deere, Murphy and Welch (1995), which argued that the 1991-92 minimum wage increases
had a severe adverse effect on employment. In all cases, applying the same methods (even using Deere, Murphy and Welch’s computer code) to the later data they find that the 1996-97 increase in the minimum wage did not have an adverse effect on employment.

Additional cross-state evidence on the impact of the 1996-97 minimum wage increases, based on Card’s (1992b) approach, is summarized in Figures 3.4 and 3.5. In the year preceding the October 1996 minimum wage increase, the percent of teenage workers who earned between the old minimum ($4.25) and the new one ($5.15) – the percent affected – ranged from 11 percent in Hawaii to 73 percent in Mississippi. Using the state-level data derived from the *Current Population Survey*, Figure 3.4 shows a scatter diagram of the percentage change in the mean wage of teenagers between the 12 months before the 1996 minimum wage increase and the 12 months after the 1997 increase versus the percentage of teenagers in the range affected by the minimum wage increases prior to the increase. (The size of the points is scaled to be proportional to the population in the state.) The upward-sloping relationship indicates that wages grew most in states that had a higher proportion of teenagers in the affected range, as one would expect if the minimum wage increase were binding. Figure 3.5 displays a scatter diagram of the change in the employment-to-population rate over the years surrounding the minimum wage increases. Although the standard model predicts a downward sloping relationship, no systematic relationship is evident. Schmitt (1999) finds that this conclusion is not altered if controls for past employment growth are held constant in a regression.

In addition, Card and Krueger (2000) reexamined and extended their earlier work with employer-

---

45 These data were provided by John Schmitt, and are analyzed in Schmitt (1999).

46 The p-value for the weighted correlation between the two series is 0.75.
reported payroll data. Figure 3.6 summarizes their main results. The 1992 New Jersey minimum wage has no apparent impact on employment in New Jersey fast food restaurants relative to that in eastern Pennsylvania. Moreover, the 1996 increase in the federal minimum wage enables the researchers to look at the experiment in reverse, as New Jersey’s state law already superseded the Federal law. Yet there is no apparent evidence that Pennsylvania’s employment grew more slowly than New Jersey’s after the Federal minimum wage increase.

The evidence suggests that the minimum wage increases in 1996 and 1997 did just what supporters had hoped for: raise wages for low-wage workers without adversely impacting employment growth. Even restaurant owners who staunchly opposed the minimum wage acknowledged that it did not reduce their hiring by the end of 1997. For example, the Wall Street Journal quoted a fast-food entrepreneur saying, “I think we saw it in more dire terms than it worked out.”\textsuperscript{47} The New York Times aptly described the jobs debate as follows: “After the Shouting; A Minimal-Impact Minimum Wage.”\textsuperscript{48}

3.4. Union Policy

Relatively few fundamental changes took place in policy towards unions in the 1990s. In March 1993 Labor Secretary Reich and Commerce Secretary Brown established the Commission on the Future of Worker-Management Relations, widely known as the Dunlop Commission, after its chair, former Labor Secretary John T. Dunlop. The Commission’s charge was to make recommendations to modernize labor


policy for the 21st century. The Commission’s report in January 1995 contained several recommendations, such as quicker representation elections and employee participation programs. The Commission also released a trenchant and sobering fact-finding analysis of developments in the labor markets in May 1994. We think it is fair to say that the Commission will be remembered more for its analysis of labor market developments than for its specific policy recommendations, which did not become law. More than anything else, the Dunlop Commission suffered from poor timing. Reaching consensus on labor policy is difficult enough, but doing so in the midst of a change in Congress makes it even more complicated.

In March 1995, President Clinton signed Executive Order 12954, which prohibited federal agencies from making contracts to buy goods and services sold by companies that permanently replace workers striking for economic reasons. Striker replacement legislation had been a priority of labor unions. Such legislation was passed by the House of Representatives in 1993, but filibustered in the Senate. The Executive Order was ruled unconstitutional by the U.S. Court of Appeals in 1996, and not appealed to the Supreme Court. Even had striker replacement been in effect, it is unlikely that it would have had a major effect on labor relations or the labor market. Strikes are increasingly rare in the United States. The number of strikes involving 1,000 or more employees declined from 51 in 1989 to 17 in 1999 according to the BLS. Although the threat of being permanently replaced may dissuade some bargaining units from going on strike, it is unlikely that striker replacement protection would have much impact on labor relations, or on the labor market more generally, in the near future.

Although there were changes in the administration of union policy as a result of appointments to the NLRB, and probably proactive federal involvement in labor strikes (such as the baseball strike and UPS strike), a fair summary is that there were no significant changes in policy toward unions in the 1990s.
Moreover, union membership as a share of the workforce continued to asymptote towards zero in the 1990s. In view of the role that unions play in expanding the middle class (see, e.g., Card, 1998) and providing voice to workers, the 1990s were a lost opportunity to revitalize policy toward unions to further the Clinton Administration’s goal of narrowing wage gaps.

3.5. Occupational Safety and Health Administration

OSHA planned to initiate two major sets of regulations during the 1990s, one dealing with ergonomic standards and the other with indoor air quality. The Agency, which considered the ergonomics standards a higher priority, made a strategic error in issuing the indoor air quality standards first. When the 104th Congress came to power in 1994, it quickly moved to prohibit OSHA from issuing ergonomics standards. After threatening deep cuts in OSHA’s budget, Congress was able to wring an agreement from the Administration that OSHA would not issue ergonomics standards. The moratorium was written into the budget. In the words of House Whip, Tom Delay (R-TX), this moratorium, "would force OSHA to cease its activities on the promulgation of an ergonomics standard that is paternalistic in concept and a menace in its implementation." Ergonomic injuries cost industry an estimated $50 billion per year in terms of missed work,

---

49 This timing was not entirely OSHA’s responsibility, however, because the DOL Chief Economist’s Office raised frequent objections to OSHA’s benefit-cost analysis of the ergonomic standards, which held up the development of the standards.

compensation costs, and medical costs. OSHA estimated that its ergonomics regulations would cost business $4.5 billion for compliance and generate $9 billion in benefits. Several employer groups claimed that OSHA vastly underestimated the compliance costs. Because most of the costs and benefits are borne privately by the parties directly involved, it would be surprising that the benefits of a standard would exceed the costs by so much – unless there was profound ignorance about injury prevention.

To bring the story to full circle, shortly before the Presidential election in November 2000, OSHA did issue ergonomics regulations, causing great consternation in Congress. On March 20, 2001, however, President Bush signed a measure repealing the proposed ergonomics rule.

Another change in OSHA policy was greater emphasis on compliance assistance instead of safety inspections. Indeed, in 1995 OSHA was awarded the Kennedy School’s “Innovations in American Government” award for the Maine Top 200 program, which targeted inspections toward employers who had the greatest risk of injury based on workers’ compensation insurance records. Under this program, which started in 1993, OSHA encouraged employers to identify workplace hazards themselves, and to take corrective actions before injuries and illnesses occurred. This is a contrast to OSHA’s past practice of fining employers if violations are discovered during inspections. Given the relatively small force of OSHA inspectors, encouragement of voluntary compliance makes a fair amount of sense.

Work-related injury and illness rates declined considerably during the 1990s. From 1992 to 1998, for example, the work injury and illness rate fell by 25 percent. This decline is all the more remarkable


\[52\] See Krueger (2000b).
because work injuries usually rise during the upswing of a business cycle. The decline in work-related injuries and illnesses represents a major improvement in the working conditions of American workers. Some analysts have attributed the decline in injuries and illnesses to OSHA’s shift in enforcement from safety inspections toward compliance assistance. While this is possible, the decline in the injury rate began before OSHA’s shift took place, and was slightly steeper in the states that administer their own state OSHA program than in those that are administered by federal OSHA. Moreover, injury rates declined in Canada and the United Kingdom as well, so it appears to be a universal trend.

3.6. Unemployment Insurance

On November 24, 1993 the Congress passed legislation requiring states to implement a Worker Profile and Reemployment Services (WPRS) program for unemployed workers through their UI systems. Worker profiling involves using a statistical model (which varies across states) to identify those UI recipients who are likely to eventually exhaust their benefits and have difficulty finding a job, and then channel them to reemployment services, including job search workshops, counseling, job clubs and referrals to employers. The program focuses on serving individuals who are predicted to suffer long-term unemployment, based on characteristics such as their recall status, first payment, industry or occupation, employment history, job tenure, education, and the local unemployment rate. Claimants referred to employment services are required to participate in those services as a condition of eligibility for UI.

The WPRS initiative represents a break from the traditional approach of the UI program in the U.S., which primarily has been concerned with providing temporary cash compensation to eligible unemployed workers while they search for a job. By implementing WPRS and related One Stop Career
More recently, work by Ashenfelter, Ashmore and Deschenes (1998) suggests that the instructional component of JSA is essential for it to be effective; stricter enforcement and verification of worker search behavior alone do not appear to reduce unemployment spells.

These figures are from Katz and Krueger (1999).
provided under WPRS are a net addition to the total amount of JSA that UI claimants receive.

The unemployment rate fell rapidly after WPRS was passed. This fortuitous development was just coincidental, however. Katz and Krueger (1999) find that it is unlikely that WPRS has had a noticeable effect on aggregate unemployment because the effect of job search assistance on unemployment duration tends to be modest, and because UI claimants only account for a minority of the unemployed. Unemployment did not fall more rapidly in the states that implemented WPRS earlier than in those that implemented it later.

Of course, the failure of WPRS to explain the record low unemployment in the late 1990s is not a mark of failure for the program. WPRS has probably modestly reduced unemployment durations for participants, and reduced UI expenditures, on net. It is an example of a policy that nudged the reemployment system toward a more rational and coordinated approach.

One feature of the UI system that received inadequate attention from the Clinton Administration during the booming economy in the late 1990s is the reserve funds. State UI reserve funds usually accumulate funds when unemployment is falling so they could be drawn down when unemployment rises. A number of states, however, failed to adequately replenish their UI funds during the late 1990s. As a consequence, about a quarter of the states are in danger of having their fund become insolvent if they are hit by a moderate recession, according to Levine (2000). New York and Texas, in particular, have the lowest reserve ratios (accumulated reserves as a percent of payroll) in the country.

3.7. NAFTA Supplemental Agreements

Public opinion polls find that Americans are of two minds about international trade in general, and
NAFTA in particular. On the one hand, they think that reducing trade barriers will be good for consumers, businesses and investors. On the other hand, they think that reducing trade barriers will be bad for workers. Indeed, polls find that Americans think that NAFTA has made more jobs available in Mexico and Canada, but fewer jobs available in the U.S. (Given the U.S. employment growth after NAFTA passed compared to our partner countries, this belief is quite a puzzle.) There is also a strong educational divide: low-educated workers are much more skeptical about the benefits of expanding trade, and are more likely to believe companies will send jobs overseas, than are highly educated workers.

With this background, it is not surprising that the public also favors -- and the Clinton Administration sought -- side agreements to protect labor and the environment. The NAFTA supplemental labor agreement, formally known as the North American Agreement for Labor Cooperation (NAALC), established the Commission for Labor Cooperation (CLC), which is run by representatives of the U.S., Mexico, and Canada. The CLC provides a public forum for addressing issues of mutual concern, monitors enforcement of existing national labor laws, investigates complaints, and recommends fines or sanctions. To the extent that CLC throws lights on instances that violates a nation’s laws, it probably serves a useful purpose.

Along with the NAFTA side agreements, the Administration sought and received Congressional funding for the NAFTA Worker Security Act in 1993. That program, which went into effect on January 1, 1994, provides workers who have been certified by DOL as having been adversely affected by NAFTA with NAFTA Trade Adjustment Assistance (TAA). NAFTA TAA entitles laid off workers to 52 weeks

---

The statistics summarized in this paragraph are from Krueger (1997).
of additional unemployment compensation beyond their ordinary 26 weeks of benefits. In addition, workers can receive job training and the related costs of tuition, books and materials, a job search allowance, and relocation expenses. Although NAFTA was strongly opposed by labor unions, the NAFTA TAA has become the gold standard for adjustment assistance because workers can receive up to 1.5 years of unemployment benefits while undergoing training. In FY 2000, $66 million was appropriated for NAFTA TAA.\textsuperscript{56}

The NAFTA side agreements and the Trade Adjustment Assistance probably generated some support for NAFTA among the public. It is noteworthy that, despite the sharp debate that accompanied NAFTA in 1993, polls find the public is strongly opposed to withdrawing from NAFTA.\textsuperscript{57}

4. Conclusion

In a statement that in retrospect is both prescient and exaggerated, candidate Clinton argued, “I know economic growth will be the best jobs program we’ll ever have. But economic growth does not come without a national economic strategy to invest in people and meet the competition.” The first claim is undoubtedly true. The rapid economic growth of the Roaring ‘90s certainly did much to improve the economic standing of working Americans. But were the investments in people in the 1990s – that national economic strategy to invest in people – necessary for this growth? We would argue that reforms to the education and training system helped make small steps toward creating a more rational and efficient system, but they were not an essential contributor to the record economic growth of the 1990s given the modest

\textsuperscript{56}Green Book (2000, p. 346).

\textsuperscript{57}See Krueger (1997).
increase in the investment in people, and “normal” rates of return on such investments.

Some would have preferred a different strategy to improve human capital and reduce inequality. A different vision would have been to: (1) divert funds from existing youth training, K-12, and tuition assistance programs, in order to pay for preschool programs and vouchers for private schools; and (2) address rising inequality by a system of wage subsidies for low-wage jobs or a negative income tax credit.58

Still others would have preferred to have pursued many of the reforms to the education and training system that took place, but fund the system at a much more generous level. As Robert Reich and George Stephanopoulos chronicle in their books, the desire to reduce the deficit prevented a major effort in investing in people.59 Consequently, the Administration followed a diverse strategy of initiating many small programs, under a broad, more coordinated umbrella, and shifted funds to programs that were believed to have higher returns.

Would it have made more sense to use the monies allocated for training and education for a negative income tax type program? Preliminarily, we note that politically, such a strategy was likely to have been – and still be – infeasible. Redistributing income to low-wage workers via education and training, and raising the minimum wage, were among the few options available to make progressive changes. Moreover, these policies were very popular. The best should not be the enemy of the good.

And the best might not have been the enemy of the good anyway. On intellectual grounds, we think

58 Heckman (1999), for example, argues that, “Public-sector training programs are an inefficient transfer mechanism and an inefficient investment policy for adult workers with few skills.”

a strong argument could be made for pursuing a diverse set of policies to achieve the goals of making work pay, reducing wage gaps, raising skills and reducing anxiety about economic change. First, it makes sense to pursue policies to achieve a given aim to the point that the marginal payoff from each policy is equal. Under most circumstances, this would suggest that different policies should be pursued. Second, if there are many goals and target groups, then one policy may not dominate in achieving all of the goals. For example, expanding Head Start may have the highest return on the margin, but it does nothing to help 16-year-old youths who are at risk of becoming involved in crime and social dependence. Third, economic change, such as globalization, creates winners and losers. It is only reasonable to expect those who will lose to go along with change -- even Pareto improving policies -- if they feel they will receive some of the benefits of the change. So, for example, NAFTA Trade Adjustment Assistance and the side agreements probably engendered some additional support for expanding trade.

Fourth, according to economic theory, if one starts from a first-best situation, any attempt to redistribute income (short of unattainable lump sum taxes and transfers) will create distortions. In this situation, it is quite plausible that pursuing a multiplicity of approaches can help minimize the aggregate distortions. For example, the EITC is expected to cause labor supply to increase for workers with very low wages because a dollar of additional earnings brings home more than a dollar after tax when the EITC is on the upswing. This shift in labor supply would be expected to depress the market wage, possibly offsetting much of the benefit of the EITC. The minimum wage limits the fall in the market wage. Moreover, many low-income people do not file taxes or request the EITC even if they are eligible. For these reasons, the EITC and minimum wage are best viewed as complimentary policies. The fact that, at moderate levels, increases in the minimum wage appear to have no adverse impact on employment only
strengthens the case for pursuing both policies (and suggests the economy is not starting from a “first best” solution). Likewise, summer employment would raise demand for low-wage workers and training would lift their marginal products above the wage floor. A good analogy is a doctor who prescribes chemotherapy to try to cure cancer, and then prescribes additional medications to offset the undesired side effects of chemotherapy, and so on.

The best evidence suggests that education and job training programs have rates of return of about 10 percent – about the same as is expected from a year of formal schooling. Some programs may have higher returns, and some lower, but 10 percent is a good figure to have in mind. The spectacular economic growth of the late 1990s had a much more profound effect on narrowing income gaps and raising employment than reasonably could be hoped for by education policy, at least in the short run. For that reason, if deficit reduction was responsible for the spectacular growth of the late 1990s, then it might have been sensible to defer massive human capital investments for the future. But if deficit reduction was not the key to the recent economic growth, then a unique opportunity might have been lost to strengthen the skills and knowledge of the workforce by not investing more in education and training in the 1990s.
References


Karoly, Lynn A., Peter W. Greenwood, Susan S. Everingham, Jill Houbé, M. Rebecca Kilburn, C. Peter Rydell, Matthew Sanders, and James Chiesa. 1998. *Investing in Our Children: What We Know and Don’t Know About the Costs and Benefits of Early Childhood Interventions*. The Rand Corporation, Santa Monica, CA.


<table>
<thead>
<tr>
<th>Legislation/Program</th>
<th>Year</th>
<th>Brief description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals 2000: Educate America Act</td>
<td>1994</td>
<td>Provides funding to schools, communities and states to raise their educational standards. It was amended in 1996.</td>
</tr>
<tr>
<td>Head Start Reauthorization</td>
<td>1994</td>
<td>Instituted performance standards and attempts to improve quality; created Early Head Start to serve low-income families with pregnant women, infants, or toddlers.</td>
</tr>
<tr>
<td>Improving America’s Schools Act</td>
<td>1994</td>
<td>Reauthorized the ESEA of 1965 and was designed to encourage local approaches to improving schools.</td>
</tr>
<tr>
<td>Public Charter School Program (Title X, Part C of ESEA)</td>
<td>1994</td>
<td>Provides grants to states to assist in the planning, program design, and initial implementation of charter schools.</td>
</tr>
<tr>
<td>School-to-Work Act</td>
<td>1994</td>
<td>Provides funding to states and districts to develop “School-to-Work” systems that are designed to attain high academic standards through contextual, applied, and focused learning.</td>
</tr>
<tr>
<td>Technology Innovation Challenge Grants Program</td>
<td>1994</td>
<td>Provides competitive grants to support demonstration projects designed to generate models of effective uses of educational technology in schools.</td>
</tr>
<tr>
<td>Technology Literacy Challenge Fund</td>
<td>1994</td>
<td>Provides states and school districts with funding to invest in educational technology and to integrate such technology into the curriculum.</td>
</tr>
<tr>
<td>Telecommunications Act of 1996 (Created the “E-rate” program)</td>
<td>1996</td>
<td>FCC adopted Universal Service Order that provides discounts (“e-rates”) for low-income and rural schools for telecommunications services.</td>
</tr>
<tr>
<td>21st Century Learning Centers</td>
<td>1997</td>
<td>Authorized under Title X, Part I of the ESEA it provides competitive grants to districts for community education centers for after school programs.</td>
</tr>
<tr>
<td>Charter School Expansion Act</td>
<td>1998</td>
<td>Extends the authorization of the Public Charter School program through FY2004. Amends the program to target funds to states with strongest statutes and increases accountability.</td>
</tr>
<tr>
<td>Program</td>
<td>Year</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Preparing Tomorrow’s Teachers to Use Technology (PT3)</td>
<td>1998</td>
<td>Authorized under Title III of the ESEA it provides competitive grants to schools of education to train new teachers to use information technology in their future classroom practice as part of the teacher education curriculum.</td>
</tr>
<tr>
<td>Class Size Reduction Program</td>
<td>1999</td>
<td>Authorized under Title VI of the ESEA it provides grants to states to help schools recruit, hire, and train teachers in order to reduce class sizes in grades 1-3.</td>
</tr>
<tr>
<td>Education Flexibility Partnership Act of 1999</td>
<td>1999</td>
<td>Authorizes the Secretary of Education to allow all states to participate in the Education Flexibility Partnership program.</td>
</tr>
<tr>
<td>The Reading Excellence Act</td>
<td>1999</td>
<td>Provides competitive grants to states which in turn distribute them to needy districts to promote the ability of children to read independently by the 3rd grade.</td>
</tr>
<tr>
<td>Legislation</td>
<td>Year</td>
<td>Brief description</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Student Loan Reform Act</td>
<td>1993</td>
<td>Created the Federal Direct Student Loan program.</td>
</tr>
<tr>
<td>Student Loan Interest Deduction (Taxpayer Relief Act of 1997)</td>
<td>1997</td>
<td>Allows up to $2,000 (in 2000/$2,500 in 2001) of interest on student loans to be tax deductible for the first 60 months of loan repayment.</td>
</tr>
<tr>
<td>Emergency Student Loan Consolidation Act of 1997</td>
<td>1997</td>
<td>Amends the Higher Education Act to provide for improved student loan consolidation services.</td>
</tr>
<tr>
<td>HOPE Scholarship</td>
<td>1998</td>
<td>Nonrefundable tax credit of 100% of first $1000 of college tuition and 50% of second $1000 for first two years of college; phased out for higher income filers. Available on a per-student basis.</td>
</tr>
<tr>
<td>GEAR UP</td>
<td>1998</td>
<td>Provides grants to partnerships between high-poverty middle schools, colleges and universities, community organizations, and business to provide tutoring, mentoring, information on college preparation and financial aid to entire grades of low-income students.</td>
</tr>
<tr>
<td>Lifetime Learning Credit</td>
<td>1999</td>
<td>Non-refundable 20% tax credit for first $5,000 tuition through 2002 and for the first $10,000 thereafter for those beyond first two years of college or those taking classes part-time; phased out for higher income filers. Available on a per-taxpayer (family) basis.</td>
</tr>
</tbody>
</table>
Figure 2.1: Trends in Reading and Math Scores by Race, 9-Year Olds

Math, White students
Math, African American students
Reading, White students
Reading, African American students

Note: Data are from the National Center of Education Statistics. Scores are graphed as the score divided by the 1996 subject-specific standard deviation for all 9 year-olds.
Figure 2.2: Enrollment in Post-secondary School, by Parental Income and Test Scores

Percentage

Math Test Tertile

Lowest income quartile  Second income quartile  Third income quartile  Highest income quartile

0% 20% 40% 60% 80% 100% 120%

Bottom  Middle  Top

48% 50% 64% 73% 67% 75% 83% 89% 82% 90% 95% 96%

Figure 2.3: Distribution of Education Tax Credits by Income, 1998 Tax Year

Source: Unpublished data from the U.S. Department of Treasury.
Figure 2.4: Federal Budget for Education, 1993 & 2000

Billions of (2000) Dollars

Pre-school
K-12
Post-secondary
Total

1993
2000
1993
2000
1993
2000
1993
2000

$3.2
$5.3
$16.2
$25.4
$18.4
$18.6
$41.1
$53.5

Note: Total for the "Department of Education" includes other departmental programs. Source: Departments of Education and Health and Human Services.
<table>
<thead>
<tr>
<th>Legislation/Initiative</th>
<th>Year</th>
<th>Brief description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americans with Disabilities Act</td>
<td>1990</td>
<td>Prohibits discrimination and requires equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, and transportation.</td>
</tr>
<tr>
<td>Family and Medical Leave Act</td>
<td>1993</td>
<td>Grants family and temporary medical unpaid leave under certain circumstances for up to twelve weeks.</td>
</tr>
<tr>
<td>North American Agreement on Labor Cooperation (NAFTA Side Agreement)</td>
<td>1993</td>
<td>Establishes Commission for Labor Cooperation run by representatives of the U.S., Mexico, and Canada to provide a public forum for issues of mutual concern, monitoring enforcement of existing national laws, investigating complaints, and recommending fines or sanctions.</td>
</tr>
<tr>
<td>Worker Profiling and Reemployment Services (WPRS) Program</td>
<td>1993</td>
<td>Required each state to implement a system in which unemployed workers were statistically profiled for reemployment services; greatly expanded the use of Job Search Assistance.</td>
</tr>
<tr>
<td>OSHA Regulations on Indoor Air Quality</td>
<td>1994</td>
<td>OSHA adopted standards regulating air quality in indoor work environments, such as ventilation and smoking.</td>
</tr>
<tr>
<td>President’s Affirmative Action Review</td>
<td>1995</td>
<td>Review committee chaired by George Stephanopolous and Christopher Edley that made recommendations leading to the President’s “Mend it, don’t end it” speech.</td>
</tr>
<tr>
<td>Striker Replacement Executive Order</td>
<td>1995</td>
<td>Executive Order prohibiting federal agencies from making contracts to buy goods and services sold by companies that permanently replace workers striking for economic reasons; ruled unconstitutional by U.S. Court of Appeals in 1996.</td>
</tr>
<tr>
<td>Minimum Wage Increase</td>
<td>1996</td>
<td>Increased the hourly minimum wage from $4.25 to $4.75 on October 1, 1996 and to $5.15 on September 1, 1997.</td>
</tr>
<tr>
<td>H-1B Visa Program</td>
<td>1998, 2000</td>
<td>H-1B visas permit foreign nationals with advanced training to work in the U.S. for a renewable three-year term. In 1998 the maximum number of visas was increased from 65,000 to 115,000 a year, and in 2000 it was increased to 200,000+ for three years.</td>
</tr>
</tbody>
</table>
Figure 3.3: Teenage Unemployment Rates, August 1996 and August 1998

![Bar chart showing teenage unemployment rates for Black Males, Black Females, White Males, and White Females in 1996 and 1998.]
Figure 3.4: Teenage Wage Growth vs. Percent Affected by 1996-97 Minimum Wage Hike

Note: Size of points is proportional to population in each state.
Figure 3.5: Change in percent of teenagers employed vs. Percent Affected by 1996-97 Minimum Wage Hike

Note: Size of points is proportional to population in each state.
Figure 3.6: Employment in New Jersey and Eastern Pennsylvania Fast Food Restaurants, Oct. 1991 to Sept. 1997, BLS Payroll Data

Source: Card and Krueger (2000), Figure 2.