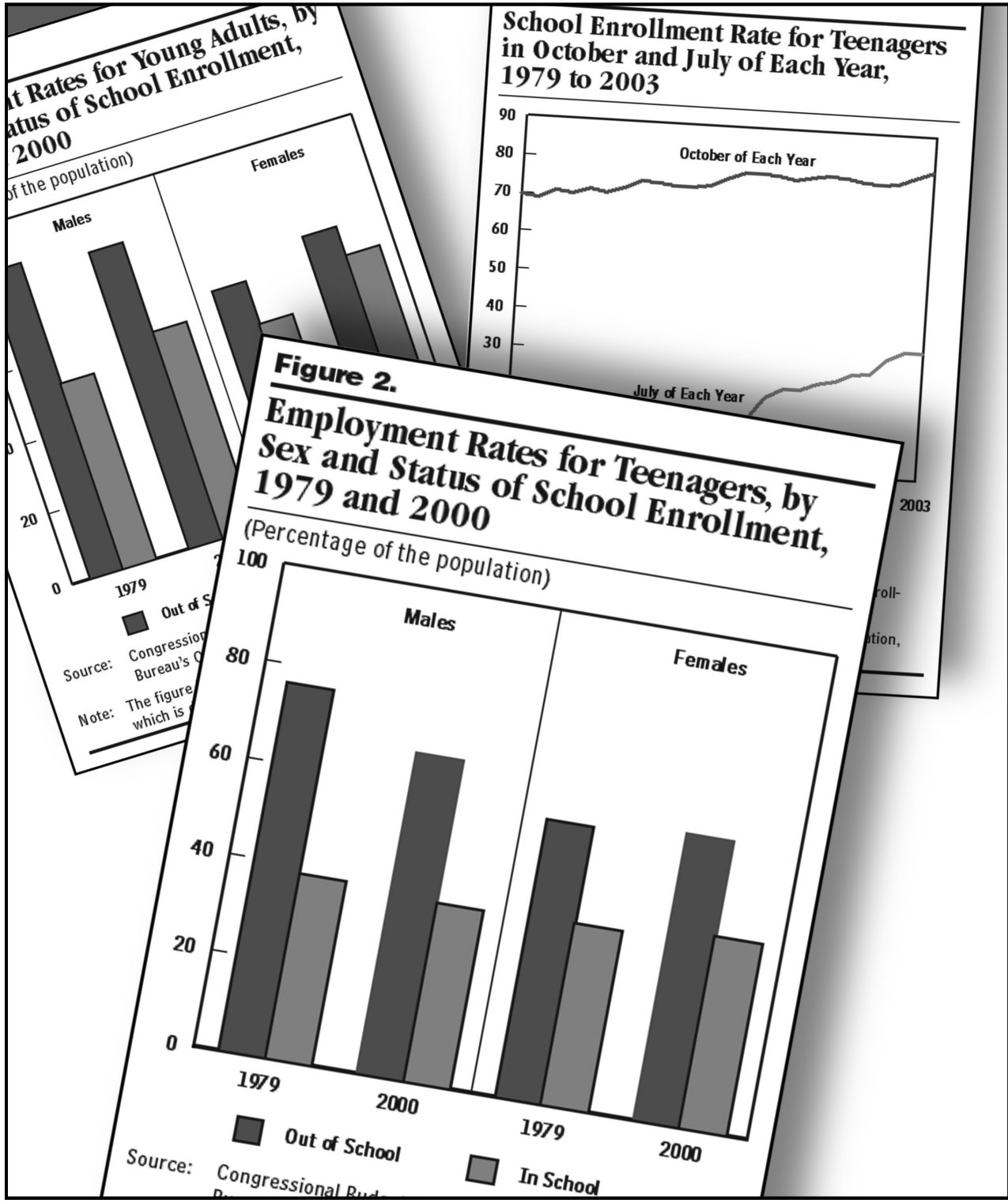


What Is Happening to Youth Employment Rates?

NOVEMBER 2004





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November 2004



Preface

As part of its projections of the federal budget and the economy, the Congressional Budget Office (CBO) projects the size of the labor force over a 10-year period. Such projections depend, in part, on the employment picture for youth. For male youth, the trend in the employment rate is downward, but for females, it is upward.

This paper examines trends in the youth labor market from 1979 to 2000 and the changes during the labor market downturn between 2000 and 2003. It also considers factors that may account for the trends, such as an increase in school enrollment rates, and presents information on the percentage of youth who are neither enrolled in school nor employed. In keeping with CBO's mandate to provide objective, impartial analysis, this paper makes no recommendations.

Nabeel Alsalam of CBO's Health and Human Resources Division prepared this paper. Lawrence Katz of Harvard University read a draft of the paper and made valuable suggestions. Within CBO, David Brauer, Paul Cullinan, Arlene Holen, Elizabeth Robinson, Christi Hawley Sadoti, Ralph Smith, and Bruce Vavrichek provided comments. Meena Fernandes and Peter Richmond provided research assistance.

John Skeen edited the paper, and Loretta Lettner proofread it. Maureen Costantino designed the cover and formatted the paper for publication. Lenny Skutnik produced the printed copies, and Annette Kalicki produced the electronic versions for CBO's Web site (www.cbo.gov).

Douglas Holtz-Eakin
Director

November 2004

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What is Happening to Youth Employment Rates?

Introduction and Summary

Most people get their first job when they are a teenager. Although such jobs are likely to be low paying and to require little expertise, they provide important opportunities for young people to pick up practical job skills—coming to work on time, taking responsibility for assigned tasks, and so forth. Because early work experience is an important part of the preparation for or the launch of a productive work life, it can affect not only young people's future but also the larger economy.

Over the past few decades, trends in the percentage of youth who are employed have been quite different depending on whether they are male or female and on how old they are (see Figure 1). For instance, between the peak labor market years of 1979 and 2000, the portion of 16- to 19-year-old males with jobs fell from 49 percent to 44 percent, but the portion of females that age with jobs was unchanged, at 44 percent. For 20- to 24-year-old men, the employment rate fell from 79 percent to 77 percent, but for women that age, it rose from 62 percent to 69 percent.

What is behind the trends in youth employment? Increasing school enrollment, in particular, puts downward pressure on youth employment overall, because young people who are in school are much less likely to have jobs than are those who are not in school (37 percent versus 67 percent among teenage males in 2000, for example). School enrollment rates for both male and female youth increased over the 1979-2000 period.

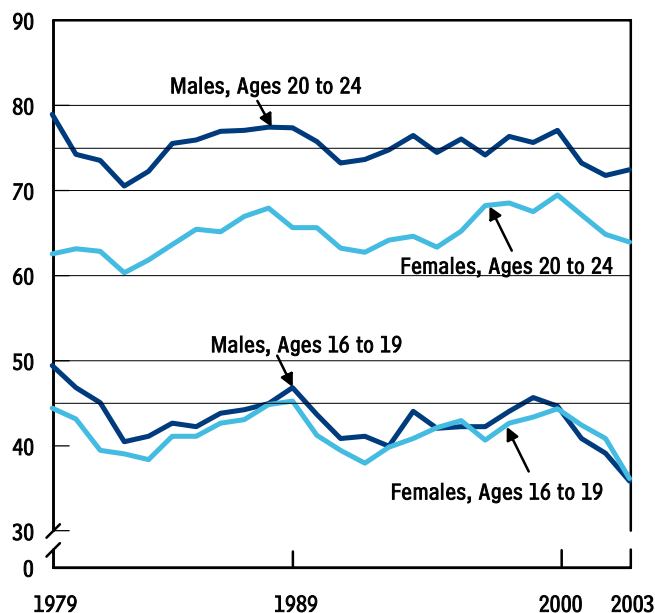
Half of the overall decline in the employment of teenage males between 1979 and 2000 is attributable to a fall from 76 percent to 67 percent in the employment rate for those who were out of school (see Figure 2). Because that fall occurred between two peak years in the labor market, it cannot be attributed to a cyclical downturn.

Indications are that the drop resulted from both a reduction in male teens' availability for work and a lessening

Figure 1.

Employment Rates for Youth, by Sex and Age, 1979 to 2003

(Percentage of the population)

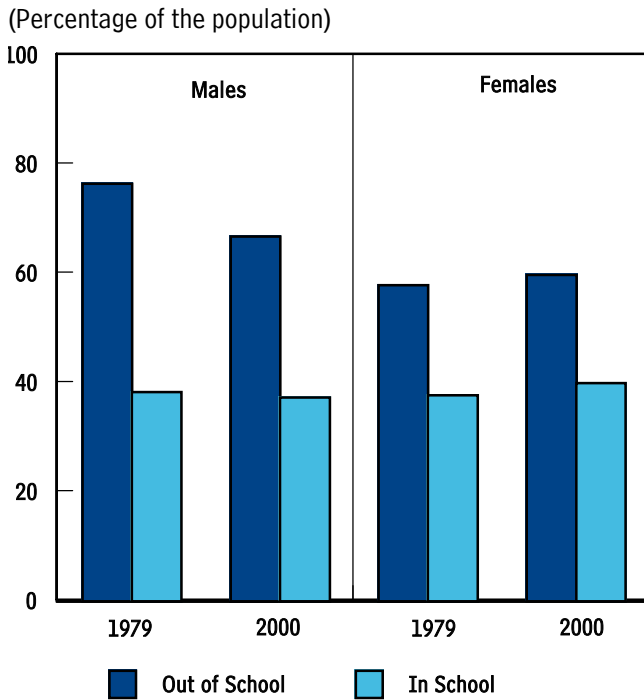


Source: Congressional Budget Office based on the Census Bureau's October Current Population Surveys.

Note: The figure covers the civilian noninstitutional population, which comprises people who are 16 years of age or older and who do not reside in institutions (for example, penal institutions and mental facilities) and who are not on active duty in the armed forces.

of the job opportunities for them. First, as the percentage of male teens with jobs went down over the period, the percentage actively looking for work did not go up. Meanwhile, the federal minimum wage adjusted for inflation fell over much of the period and was significantly lower in 2000 than it was in 1979—and thus posed less of a potential barrier to the creation of low-wage jobs. That no more teens were actively looking for work despite the easing of that potential barrier suggests that

Figure 2.
Employment Rates for Teenagers, by Sex and Status of School Enrollment, 1979 and 2000

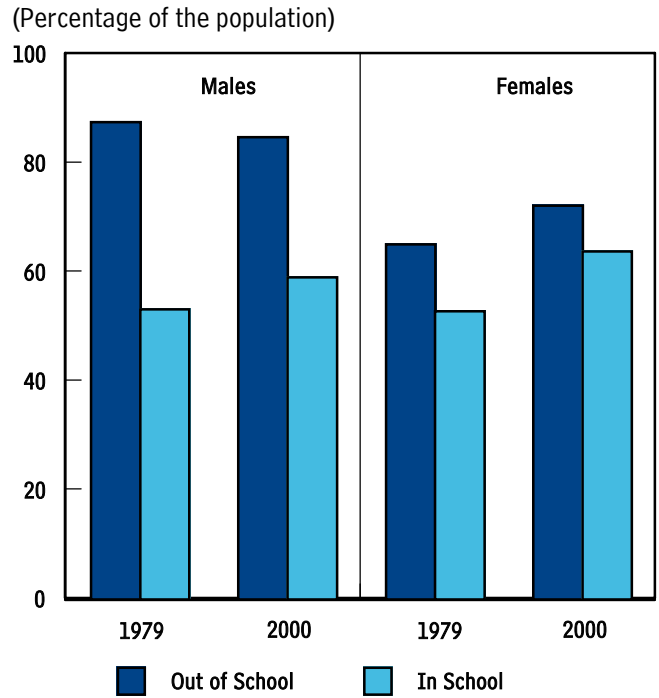


Source: Congressional Budget Office based on the Census Bureau's October Current Population Surveys.
 Note: The figure includes the civilian noninstitutional population, which is defined in a note accompanying Figure 1.

fewer teens were available for work or interested in the available jobs. Second, although job opportunities for male teens were hurt by shrinking employment at such establishments as gasoline stations and grocery stores, they were helped by growing employment at other establishments employing youth. Nevertheless, the hourly wages paid to male teens declined during the 1980s, indicating that employers were less interested in hiring them, probably because employers increasingly needed skilled workers more than unskilled ones. Furthermore, an influx of immigrants, predominantly males, who were unskilled but eager to work may have provided employers with an alternative to hiring male teens.

Among female teens, the unchanged employment rate masks two offsetting trends. On the one hand, the employment rate both for those out of school and for those in school increased slightly over the period. On the other

Figure 3.
Employment Rates for Young Adults, by Sex and Status of School Enrollment, 1979 and 2000



Source: Congressional Budget Office based on the Census Bureau's October Current Population Surveys.
 Note: The figure includes the civilian noninstitutional population, which is defined in a note accompanying Figure 1.

hand, the increase in their school enrollment rate acted to bring their overall employment rate down.

The trends among young men and women were similar to those among teens. For example, among young men ages 20 to 24, the employment rates for those who were out of school also fell (see Figure 3). Among young women that age, the increase in the employment rates both for those still in school and for those out of school dominated the employment-reducing effect of a large rise in their school enrollment rate.

In 2000, 4 million youth ages 16 to 24 (60 percent of them female) were neither in school nor working. About 1.7 million youth in that status had not finished high school, and most were not even looking for work. Another half million, mostly male, were in prisons and juvenile and other institutions.

The recent downturn in the labor market has reinforced the trends that occurred over the 1979-2000 period. Between 2000 and 2003, the employment rate of teens fell from 44 percent to 36 percent. Among young adults, the employment rate fell from 72 percent to 68 percent. The number of youth both out of school and not working rose from 4 million to 4.8 million. Altogether, the fall in employment among teens was larger than during past downturns, although judging from past business cycles, most of the loss will probably be recovered.

From a policy perspective, the trends in youth employment and school enrollment provide a decidedly mixed picture. The rising school enrollment rates for both males and females and the increasing employment rates for females are positive. However, the large secular decline in the employment rate for out-of-school teenage males is not, and the status of many youth who are neither in school nor working raises questions about what they are doing and what their prospects are for the future.

School Enrollment Rates

Youth who are enrolled in school are much less likely to have a job or to be looking for a job than are youth who are not in school. Furthermore, if in-school youth do have a job, it is rarely a full-time job—in 2003, only 14 percent of teenage males who were employed and in school worked full time, compared with 62 percent of those who were employed and out of school. So any change in the percentage of youth who are in school can affect the overall percentage who are working and the percentage who are working full time. (See Box 1 for a discussion of the transition from school to work.)

Trends in School Enrollment from 1979 to 2003

School enrollment rates for young people have increased substantially over the past 25 years. Between 1979 and 2003, they increased more for teenage females (14 percentage points) than for teenage males (9 percentage points) (see Table 1).

Predictably, school enrollment rates are lower for young adults than for teenagers, because many young adults have completed their education. However, over the 1979-2003 period, enrollment rates for young adults increased substantially—by over one-quarter for young adult males and by three-quarters for young adult females.

Had employment rates among in-school and out-of-school teenage males remained the same as those in 1979, the increases in their school enrollment rate between 1979 and 2003 would have reduced their overall employment rate by 3.4 percentage points (see Table 1). For other groups of youth, the effect of increased school enrollment in reducing or limiting employment rates was similar—2.8 percentage points for teenage females, 2.5 for young adult males, and 2.1 for young adult females.

School enrollment rates increased even more in the summer months than they did during the school year. From 1985 to 2003, the enrollment rate of teens for the month of July more than tripled, increasing from 10 percent to 33 percent (see Figure 4).¹ It was 38 percent in July 2004. For young adults, the rate doubled, increasing from 9 percent in 1985 to 19 percent in 2003 (17 percent among males and 22 percent among females).

The teens enrolled during the summer months appear to be similar to those enrolled during the school year. In 2003, the group was equally divided between males and females, and the distributions of their ages and family incomes were the same as those for teens enrolled during the regular school year. However, summer students were somewhat more likely to be enrolled in college than were students enrolled during the regular school year (34 percent versus 28 percent in 2003).

Some Reasons for the Increases in School Enrollment Rates

The most likely reason for the growth in school enrollment rates is the attraction of better job opportunities available to those who complete more education.² One indication of those opportunities is the substantially higher earnings of college graduates compared with those of high school graduates of the same age. For example, in 2002, male college graduates (without an advanced degree) earned 94 percent more than high school graduates (\$64,000 versus \$33,000) (see Table 2). That earnings advantage grew from approximately 50 percent during

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1. Since 1985, the Census Bureau has been measuring school enrollment rates every month in the Current Population Survey. Before then, school enrollment rates were measured only in October.
 2. Orley Ashenfelter, Colm Harmon, and Hessel Oosterbeek, "A Review of Estimates of the Schooling/Earnings Relationship, with Tests for Publication Bias," *Labour Economics*, vol. 6, no. 4 (November 1999), pp. 453-470.

Box 1.**The Transition from School to Work**

Between the ages of 16 and 24, young people generally make the transition from full-time education to full-time work. The vast majority of 16-year-olds are enrolled in high school. Then, some young people leave school, and the enrollment rates for young people in high school and in college fall.

In 2003 (outside the summer months), the school enrollment rate ranged from 97 percent for 16-year-olds to 20 percent for 24-year-olds.¹ However, very few 16 year-olds work, especially full time. As young people age, more and more take on jobs, and their employment rates rise. In 2003, 2 percent of 16-year-olds were employed full time and 19 percent, part time. Among 24-year-old men, those employment rates were 69 percent and 11 percent, respectively, and among 24-year-old women, 55 percent and 15 percent. That shift to employment reflects

1. All statistics apply to the civilian noninstitutional population. As a point of reference, there are about 36 million 16- to 24-year-olds in that population and roughly another million in prison or in the military.

not only leaving school to go to work but also students' increasingly taking jobs while attending school. Among 16 year-olds, the percentage of students with jobs was 18 percent, whereas among 24-year-old men and women, the percentages were 59 and 62, respectively.

When young people leave school, those who have attained a higher level of education are more likely to be employed. For example, in 2003, among 19-year-olds who were out of school, 68 percent of those who graduated from high school had jobs, compared with 50 percent of those who had not graduated. Among out-of-school 21-year-olds, 77 percent of those with some college had jobs, compared with 70 percent of those with a high school diploma but no time in college. Among out-of-school 24-year-olds, 88 percent of those with at least an associate's degree had jobs, compared with 81 percent with some time in college but no degree. Greater educational attainment leads to more job opportunities, and people with a greater interest in work also are more likely to invest in education.

the late 1970s. In addition to higher earnings, workers with more education typically have jobs with better fringe benefits and are less likely to be unemployed.³

However, higher school enrollment rates for youth have not necessarily led to parallel increases in their educational attainment. Among recent cohorts of young males, no more are finishing high school, no more are getting some postsecondary education, and no more are obtain-

ing a bachelor's degree. Female youth, however, are completing more education. More are finishing high school, more are getting some postsecondary education, and more are obtaining a bachelor's degree.

A possible reason for higher school enrollment rates among males without a parallel increase in their educational attainment is that students are generally taking longer to finish their education. At the high school level, the longer time may reflect the stricter graduation standards that many states have adopted since the early 1980s in an effort to increase graduates' academic qualifications. At the college level, students appear to be stretching out their time as undergraduates. For example, among bachelor's degree recipients in 1992, 59 percent had completed

3. Henry S. Farber and Helen Levy, "Recent Trends in Employer-Sponsored Health Insurance Coverage: Are Bad Jobs Getting Worse?" *Journal of Health Economics*, vol. 19, no. 1 (2000), pp. 93-119; and Janet Currie and Aaron Yelowitz, "Health Insurance and Less Skilled Workers," in David Card and Rebecca M. Blank, eds., *Finding Jobs: Work and Welfare Reform* (New York: Russell Sage Foundation, 2000), pp. 233-261.

Table 1.**School Enrollment Rates for Youth, by Age, Sex, and Education Level, 1979 to 2003**

(Percentage of the population)

| | 16- to 19-Year-Olds | | | | | | 20- to 24-Year-Olds | | | | | |
|----------------------------------|---------------------|--------|---------|---------|--------|---------|---------------------|--------|---------|---------|--------|---------|
| | Males | | | Females | | | Males | | | Females | | |
| | Both | High | College | Both | High | College | Both | High | College | Both | High | College |
| | Levels | School | College | Levels | School | College | Levels | School | College | Levels | School | College |
| 1979 | 71 | 53 | 18 | 67 | 47 | 21 | 25 | 3 | 23 | 22 | 3 | 19 |
| 1982 | 71 | 52 | 19 | 69 | 47 | 22 | 26 | 2 | 24 | 23 | 2 | 22 |
| 1989 | 74 | 53 | 21 | 73 | 48 | 25 | 27 | 1 | 26 | 27 | 1 | 27 |
| 1992 | 79 | 58 | 21 | 77 | 51 | 26 | 31 | 1 | 30 | 32 | 1 | 32 |
| 2000 | 76 | 55 | 20 | 78 | 51 | 27 | 31 | 1 | 30 | 34 | 1 | 33 |
| 2003 | 80 | 60 | 20 | 81 | 56 | 26 | 33 | 1 | 31 | 39 | 1 | 37 |
| Change in Enrollment Rate | | | | | | | | | | | | |
| 1979 to 2000 | 4.4 | 2.3 | 2.1 | 10.9 | 4.6 | 6.3 | 5.6 | -1.5 | 7.0 | 12.1 | -1.6 | 13.7 |
| 2000 to 2003 | 4.5 | 4.6 | -0.2 | 3.2 | 4.4 | -1.2 | 1.8 | 0.2 | 1.6 | 4.5 | 0.4 | 4.2 |

Memorandum:**Employment-Reducing Effect of the Change in the Enrollment Rate^a**

1979 to 2003

(Percentage points) -3.4

-2.8

-2.5

-2.1

Source: Congressional Budget Office based on the Census Bureau's October Current Population Surveys.

Notes: The table covers the civilian noninstitutional population, which is defined in a note accompanying Figure 1.

Data are rounded to the nearest percent or 10th of 1 percent. Changes are calculated from unrounded data and then rounded.

- a. The difference in 1979 between the employment rates of those in school and those out of school (see Table 3) times the change between 1979 and 2003 in their enrollment rate. For males ages 16 to 19, for example, this effect is $(38-76) \times (80-71) = -3.4$ percentage points.

their degree within five years of starting, but by 2000, that figure had slid to 55 percent.⁴

Trends in the Employment of Out-of-School and In-School Youth, 1979 to 2000

To distinguish longer-term trends in behavior from short-term cyclical effects of downturns in the labor market, most of the analysis in this paper is based on changes between the peak labor market years of 1979 and 2000.⁵ The last section briefly examines the recent cyclical

downturn in the employment rate for teenagers between 2000 and 2003 and compares that with what happened during earlier downturns.

Trends in Employment and Labor Force Participation Among Out-of-School Youth

Fewer than a quarter of teens are not in school.⁶ Although some of those teens may later continue their education, most are probably beginning a career. Those early experiences in the labor market can have lasting consequences for their earnings.

4. U.S. Department of Education, National Center for Education Statistics, *A Descriptive Summary of 1999-2000 Bachelor's Degree Recipients 1 Year Later With an Analysis of Time to Degree*, NCES 2003-165, (Washington, D.C.: Government Printing Office, 2003).

5. Measured using the annual average employment rate of teenagers. There are slight differences in the timing of peak and trough employment rates across demographic groups.

6. Among male teens, the figure was 24 percent in 2000, down from 29 percent in 1979 (see Table 1).

Table 2.**Mean Annual Earnings of Workers Age 18 or Older, by Sex and Educational Attainment, 1979 to 2002**

(As a percentage of the earnings of high school graduates)

| | Men | | | | | Women | | | | |
|------|-----------------------|-------------|--------------|-------------------|-----------------|-----------------------|-------------|--------------|-------------------|-----------------|
| | Less Than High School | High School | Some College | Bachelor's Degree | Advanced Degree | Less Than High School | High School | Some College | Bachelor's Degree | Advanced Degree |
| 1979 | 74 | 100 | 103 | 150 | 184 | 72 | 100 | 107 | 141 | 189 |
| 1989 | 65 | 100 | 114 | 172 | 223 | 66 | 100 | 118 | 169 | 216 |
| 2000 | 67 | 100 | 119 | 199 | 280 | 66 | 100 | 119 | 184 | 258 |
| 2002 | 68 | 100 | 117 | 194 | 278 | 64 | 100 | 113 | 179 | 240 |

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Surveys (March).

Note: Based on people in the civilian noninstitutional population with some earnings during the calendar year. That population is defined in a note accompanying Figure 1.

Among out-of-school youth, between 1979 and 2000, the percentage of teenage males who were employed fell from 76 percent to 67 percent. For young adult males, the employment rate fell more modestly, from 87 percent to 85 percent (see Table 3). The decrease for teenage males is very large, considering that it is measured between two years with strong labor markets.⁷ As the percentage of out-of-school teenage males who were employed declined between 1979 and 2000, the percentage actively looking for work did not rise. Thus, the labor force participation rate (which is the sum of the percentage employed and the percentage actively looking for work) dropped as well—suggesting that, over time, more out-of-school teenage males were either not available for work, were not interested in taking the available jobs, or had become discouraged about their job prospects and stopped looking for work (see Table 4).

Among out-of-school teenage females, the percentage employed rose from 58 percent to 60 percent, and among young adult women, it rose from 65 percent to 72 percent (see Table 3). Although teenage females and young adult women who were out of school were less likely than their male counterparts to have jobs, that gap got smaller.

7. The increasing enrollment rate for youth raises the question of whether those teens with the poorest skills in the labor market are becoming more concentrated in the shrinking out-of-school group. However, one measure of preparation for the labor market—the percentage who finished high school—did not fall among out-of-school teens over the 1979-2000 period.

Trends in the Work Behavior of Students

More than three-quarters of teenagers are students, and, in 2000, almost 40 percent of teenage students worked (averaging 20 hours a week), and more than 60 percent of young adult students worked (averaging 28 hours a week). Research has found no detrimental effects on educational achievement when high school students make a light to moderate commitment to working. Instead, when people reach their mid-20s, their earnings and fringe benefits are positively associated with the hours they worked as seniors in high school.⁸

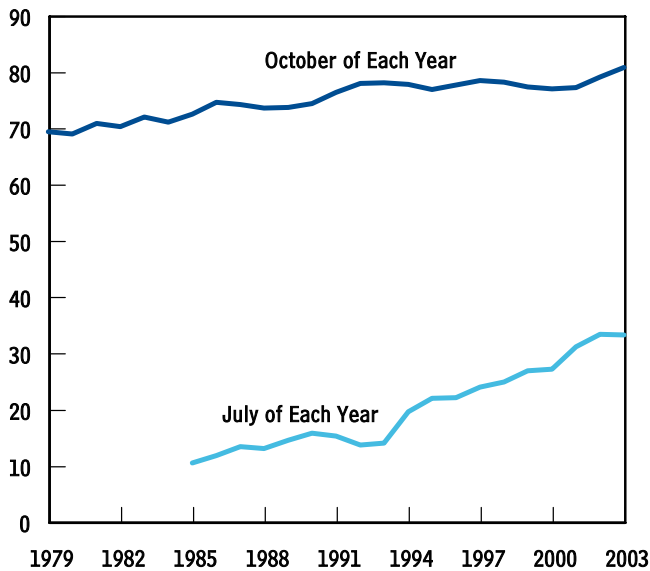
The tendency for students to work has generally risen over past three decades. Among teenagers, most of that increase occurred during the 1970s, so their employment rate was about the same in 2000 as it was in 1979. Among young adults, it increased throughout the period (see Table 3).

Changes in the Labor Markets Where Youth Work

Several sources of evidence on the job opportunities for youth point both to a decline in teenage and young adult males' availability for work and to a decline in the relative job opportunities for males.

8. See Christopher J. Ruhm, "Is High School Employment Consumption or Investment?" *Journal of Labor Economics*, vol. 15, no. 4 (1997), pp. 735-776.

Figure 4.
School Enrollment Rates for Teenagers
in October and July of Each Year,
1979 to 2003



Source: Congressional Budget Office based on the Census Bureau's monthly Current Population Surveys.

Notes: Before 1985, the Census Bureau measured school enrollment rates only in October.

The figure includes the civilian noninstitutional population, which is defined in a note to Figure 1.

As the percentage of male youth with jobs declined over the 1979-2000 period, the percentage actively looking for work did not go up. Meanwhile, the inflation-adjusted minimum wage dropped substantially, which could have led to the creation of more low-wage jobs. That no more male youth were actively looking for a job despite the easing of a potential barrier suggests that fewer were available for work or interested in the available jobs.

The shifts in employment among sectors of the economy are consistent with improving job opportunities for female youth along with stagnant or declining opportunities for their male counterparts. Also, the entry of many unskilled immigrants into the labor force, two-thirds of whom were male, probably reinforced the decline of job opportunities for male as compared to female youth. Overall, the declining hourly wages of youth suggest that employers were less interested in hiring them, at least during the 1980s, probably both because employers increasingly needed more skilled workers and because im-

migrants provided an alternative source of unskilled workers.

Indicators of Shifting Job Opportunities: Unemployment and Wages

Trends in the percentage of out-of-school male youth who do not have a job but are actively looking for one do not suggest a pattern of declining job opportunities. For teenage males, the percentage actively looking for work was about the same in 2000 as it was in 1979. Among young adult males, it was just slightly lower. However, those facts do not rule out the possibility that job opportunities had declined and youth who wanted a job stopped looking because they became discouraged about their prospects for finding one. (Between 1979 and 2000, the percentage of teenage females and young adult females who were employed rose a few percentage points, and the percentage actively looking for work fell a few points, which is not a pattern that suggests declining job opportunities.)

The trends in wages generally suggest that teenagers may have lost job opportunities after 1979 but then regained some of them by 2000. Between 1979 and 1985, the average wages earned by youth (adjusted for inflation) fell dramatically, and they did not rebound by the next peak in the labor market, in 1989. Increases began in the later part of the recovery of the 1990s, so by the next peak, in 2000, average wages for young workers had rebounded to some extent. For example, among male teens, the average hourly wage (in 2003 dollars) fell from about \$8.90 in 1979 to \$7.10 in 1985 and 1989, but then it increased to about \$7.50 in 2000.

Declining job opportunities for less skilled workers may have been a part of the reason for the decline in teens' wages in the early 1980s.⁹ Wages also fell for low-skilled adult males during that period as developments in many sectors of the economy led to an increase in the demand

9. Much economic research concludes that the so-called skilled-biased technical change is an important factor behind the increasing earnings of college graduates relative to high school graduates. Over time, firms have changed their methods for producing goods and services in ways that have increased their demand for more-educated workers. See, for example, Lawrence Katz and Kevin Murphy, "Changes in Relative Wages, 1963-1987: Supply and Demand Factors," *Quarterly Journal of Economics*, vol. 107, no. 1 (1992), pp. 35-78.

Table 3.**Employment Rates for Youth, by Age, Sex, and School Enrollment Status, 1979 to 2003**

(Percentage of the population)

| | 16- to 19-Year-Olds | | | | | | 20- to 24-Year-Olds | | | | | |
|-----------------------------------|---------------------|--------|--------|---------|--------|--------|---------------------|--------|--------|---------|--------|--------|
| | Males | | | Females | | | Males | | | Females | | |
| | All | In | Out of | All | In | Out of | All | In | Out of | All | In | Out of |
| | | School | School | | School | School | | School | School | | School | School |
| 1979 | 49 | 38 | 76 | 44 | 38 | 58 | 79 | 53 | 87 | 62 | 53 | 65 |
| 1982 | 40 | 31 | 62 | 39 | 34 | 50 | 70 | 49 | 78 | 60 | 53 | 62 |
| 1989 | 47 | 38 | 71 | 45 | 42 | 54 | 77 | 55 | 85 | 66 | 60 | 68 |
| 1992 | 41 | 34 | 66 | 38 | 35 | 48 | 74 | 56 | 81 | 63 | 56 | 66 |
| 2000 | 44 | 37 | 67 | 44 | 40 | 60 | 77 | 59 | 85 | 69 | 64 | 72 |
| 2003 | 36 | 29 | 61 | 36 | 32 | 52 | 72 | 57 | 80 | 64 | 57 | 68 |
| Change (Percentage points) | | | | | | | | | | | | |
| 1979 to 2000 | -4.8 | -1.0 | -9.7 | 0.0 | 2.2 | 1.9 | -1.9 | 5.9 | -2.7 | 6.9 | 11.1 | 7.0 |
| 2000 to 2003 | -8.8 | -7.9 | -5.7 | -8.2 | -7.5 | -7.9 | -4.6 | -1.8 | -5.2 | -5.6 | -6.9 | -4.1 |

Source: Congressional Budget Office based on the Census Bureau's October Current Population Surveys.

Note: The table covers the civilian noninstitutional population, as defined in a note accompanying Figure 1.

for skilled relative to unskilled workers. Furthermore, the minimum wage (adjusted for inflation) was relatively high in the late 1970s and, despite increases during the early 1980s, was eroded by the high inflation rates of those years. Although the minimum wage (in 2003 dollars) stood at \$7.13 per hour in 1979, it was \$5.63 per hour in 1985, and, consequently, posed less of a potential barrier to the employment of teenagers.

Trends in the Sectoral Distribution of Employment and Job Opportunities for Youth

Over the past 25 years, youth have shifted where they work and what they do at work in response to changing opportunities in the labor market. However, the growth of some sectors of the U.S. economy and the contraction of other sectors may have contributed to the growth of employment rates for female youth and to the decline of employment rates for males.

Female youth may have benefited from the sectoral shifts in employment over the past 25 years. If their share of employment within each sector had stayed the same as it was in 1979, the shifting distribution of employment across sectors would have increased their overall employment rate in 2000 by 1.6 percentage points for teenage

females and by 3.6 percentage points for young adult females.

Job opportunities for male youth, however, may have weakened with sectoral shifts in employment. If their share of employment within each sector had stayed the same as it was in 1979, the shifting distribution across sectors would have decreased the employment rates in 2000 by 0.1 percentage points for teenage males and by 2.5 percentage points for young adult males.

Young people work in relatively few sectors of the economy, so the growth or contraction of those sectors can have significant effects on their job opportunities. For example, many young people work in eating and drinking establishments. Between 1979 and 2000, the share of all employment in those establishments grew 19 percent, which benefited youth. In 2000, a quarter of employed teenagers worked in those establishments. They also benefited from the growth of recreation and entertainment services, health services, and transportation services. However, other traditional places of employment for teenagers shrank over the period. For example, employment at gasoline stations, an important source of employment for teenage males in 1979, shrank substantially over the period.

Table 4.**Labor Force Participation Rates for Out-of-School Youth, by Age and Sex, 1979 to 2003**

(Percentage of the population)

| | 16- to 19-Year-Olds | | 20- to 24-Year-Olds | |
|-----------------------------------|---------------------|---------|---------------------|---------|
| | Males | Females | Males | Females |
| 1979 | 89 | 72 | 95 | 72 |
| 1982 | 86 | 69 | 94 | 73 |
| 1989 | 87 | 67 | 93 | 74 |
| 1992 | 81 | 62 | 92 | 74 |
| 2000 | 79 | 73 | 92 | 77 |
| 2003 | 78 | 67 | 90 | 77 |
| Change (Percentage points) | | | | |
| 1979 to 2000 | -9.6 | 0.8 | -3.3 | 5.0 |
| 2000 to 2003 | -1.0 | -6.2 | -2.0 | -0.7 |

Source: Congressional Budget Office based on the Census Bureau's October Current Population Surveys.

Note: The labor force participation rate is the percentage of the civilian noninstitutional population (as defined in a note accompanying Figure 1) that either have a job or are actively looking for one.

Growth in the Competition for Youth in the Labor Market: Unskilled Immigrants

Immigrant labor has been the largest source of growth in the labor force, accounting for about half of that growth between 1990 and 2003.¹⁰ Increasingly, immigrants have little formal education, so the native workers whose earnings and employment are most likely to have been affected are unskilled and young workers, particularly those who have not finished high school.¹¹ Hence, the influx of immigrants may have contributed to the fall in the employment of male youth, particularly the large decline for out-of-school male teens.

The increase in the foreign-born population may have increased the competition for the jobs that out-of-school native-born males seek more than it has for the jobs that

native-born females seek. Foreign-born men are more likely to be in the labor force than are native-born men (89 percent versus 85 percent for those ages 20 to 64). However, foreign-born women are significantly less likely to be in the labor force than are native-born women (74 percent versus 63 percent).

Youth Neither Enrolled in School Nor Working

During the months of the school year in 2000, an average of 4 million youth ages 16 to 24 were neither in school nor working (60 percent of them were female).¹² Nearly 40 percent of those youth had not finished high school, and most were not even looking for work. That status raises the question of what they were doing and their prospects for the future.

Family background plays a role. Teens from low-income families are much more likely to be neither enrolled in school nor employed than are those from higher-income families. Teens whose parents did not finish high school

10. See Andrew Sum and others, "New Immigrants in the Labor Force and the Number of Employed New Immigrants in the U.S. from 2000 Through 2003: Continued Growth Amidst Declining Employment Among the Native Born Population," Center for Labor Market Studies, Northeastern University (December 2003).

11. For a recent analysis, see George Borjas, "The Labor Demand Curve Is Downward-Sloping: Reexamining the Impact of Immigration on the Labor Market," *Quarterly Journal of Economics*, vol. 118, no. 4 (November 2003), pp. 1335-1374.

12. Excluding residents of institutions and members of the Armed Forces.

Table 5.**School Enrollment and Employment Status of Youth, by Age and Sex, 1979 to 2003**

(Percentage of the population)

| | Enrolled in School | | Not Enrolled in School | | Total | Enrolled in School | | Not Enrolled in School | | Total |
|------|---------------------------------|--------------|------------------------|--------------|-------|-----------------------------------|--------------|------------------------|--------------|-------|
| | Employed | Not Employed | Employed | Not Employed | | Employed | Not Employed | Employed | Not Employed | |
| | 16- to 19-Year-Old Males | | | | | 16- to 19-Year-Old Females | | | | |
| 1979 | 27 | 44 | 22 | 7 | 100 | 25 | 42 | 19 | 14 | 100 |
| 1982 | 22 | 49 | 18 | 11 | 100 | 23 | 46 | 16 | 15 | 100 |
| 1989 | 28 | 46 | 18 | 7 | 100 | 30 | 42 | 15 | 12 | 100 |
| 1992 | 27 | 52 | 14 | 7 | 100 | 27 | 50 | 11 | 12 | 100 |
| 2000 | 28 | 47 | 16 | 8 | 100 | 31 | 47 | 13 | 9 | 100 |
| 2003 | 24 | 57 | 12 | 8 | 100 | 26 | 55 | 10 | 9 | 100 |
| | 20- to 24-Year-Old Males | | | | | 20- to 24-Year-Old Females | | | | |
| 1979 | 13 | 12 | 65 | 9 | 100 | 12 | 10 | 51 | 27 | 100 |
| 1982 | 13 | 13 | 57 | 16 | 100 | 12 | 11 | 48 | 29 | 100 |
| 1989 | 15 | 12 | 62 | 11 | 100 | 16 | 11 | 49 | 24 | 100 |
| 1992 | 17 | 14 | 56 | 13 | 100 | 18 | 14 | 44 | 23 | 100 |
| 2000 | 18 | 13 | 59 | 11 | 100 | 22 | 12 | 48 | 18 | 100 |
| 2003 | 19 | 14 | 54 | 14 | 100 | 22 | 17 | 42 | 20 | 100 |

Source: Congressional Budget Office based on the Census Bureau's March Current Population Surveys.

Note: The table covers the civilian noninstitutional population, as defined in a note to accompanying Figure 1.

are twice as likely to be in that status as those whose parents have at least some postsecondary education.

In 2000, more than a quarter of a million female youth were neither enrolled in school nor employed, had not finished high school, and had a young child but no spouse at home. In that situation, such youth are particularly likely to have little income and to rely on government programs such as Temporary Assistance for Needy Families and Food Stamps. The number was up from about 210,000 in 1989 despite the increases in school enrollment and employment rates and a decline in pregnancy rates among teens. However, in percentage terms, the portion of female teens who were both not in school and not employed dropped from 14 percent in 1979 to 9 percent in 2000; the portion of young women in that situation dropped from 27 percent to 18 percent (see Table 5).

In contrast, the percentage of male youth who were neither enrolled in school nor working was slightly higher in 2000 than in 1979. However, those data do not take ac-

count of those who were residents of institutions and those who were in the armed forces.

In 2000, almost 500,000 young men were in prisons and juvenile and mental institutions, up from about 270,000 in 1980. After being released, youth who have been incarcerated have lower employment rates than other youth. In turn, low employment rates are associated with higher rates of recidivism.¹³

In 2000, the number of youth in the armed forces, at 450,000, was down from its level in 1980, which was 840,000. Taking account of the increasing number who were in institutions and the decreasing number who were in the armed forces raises the percentage of all male youth who were either out of school and not working or in institutions (see Table 6).

13. Harry J. Holzer, Steven Raphael, and Michael A. Stoll, "Employment Barriers Facing Ex-Offenders," Urban Institute Discussion Paper No. 410885 (May 2003).

Table 6.**Youth Who Are Out of School and Not Working, by Age and Sex, 1980 to 2000**

| | Number (Thousands) | | Percentage of the | |
|-----------------------------------|--|--|--|---|
| | Residents of Institutions ^a | Members of the Armed Forces ^b | Civilian Noninstitutional Population Out of School and Not Working | Total Population ^c Either Out of School and Not Working or in an Institution |
| 16- to 19-Year-Old Males | | | | |
| 1980 | 98 | 222 | 9 | 9 |
| 1990 | 129 | 128 | 8 | 9 |
| 2000 | 181 | 83 | 8 | 10 |
| 16- to 19-Year-Old Females | | | | |
| 1980 | 28 | 27 | 14 | 14 |
| 1990 | 24 | 22 | 12 | 12 |
| 2000 | 25 | 19 | 9 | 9 |
| 20- to 24-Year-Old Males | | | | |
| 1980 | 173 | 531 | 14 | 14 |
| 1990 | 220 | 452 | 11 | 12 |
| 2000 | 313 | 293 | 11 | 13 |
| 20- to 24-Year-Old Females | | | | |
| 1980 | 28 | 58 | 27 | 27 |
| 1990 | 25 | 62 | 23 | 23 |
| 2000 | 26 | 54 | 18 | 18 |

Sources: U.S. Department of Commerce, Bureau of the Census, Decennial Census of the Population; and Congressional Budget Office based on the Census Bureau's October Current Population Surveys.

Note: Differences are calculated from unrounded percentages and then rounded to the nearest 10th of 1 percent.

a. For instance, people residing in penal and mental facilities.

b. Active-duty personnel.

c. The total population is the sum of the civilian noninstitutional population (as defined in a note accompanying Figure 1), active-duty personnel in the armed forces, and residents of institutions.

The Cyclical Downturn in the Employment of Youth from 2000 to 2003

During weak labor markets, the employment rate of teens generally falls more than it does for adults. Between 2000 and 2003, the employment rate for teenagers fell dramatically, from 44 percent to 36 percent, its lowest level in the post-World War II period. Furthermore, that drop was greater than those that occurred during the cyclical downturns of 1979 to 1982 and 1989 to 1992 and was across the board in that it affected both males and females and both in-school and out-of-school teens. Among

young adults, the employment rate fell about 5 percentage points.

However, employment rates among youth can be expected to rebound when the labor market strengthens, as they have done in earlier upturns in the labor market from 1982 to 1989 and from 1992 to 2000, but perhaps not uniformly. For example, in contrast to earlier downturns, that of 2000 to 2003 saw the employment rate of male teens fall less for out-of-school youth than it did for students. Going forward, high school enrollment rates will continue to have an influence on employment rates.

