Still Young, Idle, and Jobless: The Continued Failure of the Nation's Teens to Benefit From Renewed Job Growth

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Introduction

The formulation of national workforce development policies for youth and the planning and design of youth employment and training programs at the state and local level are dependent upon the availability of timely and reliable information on youth labor market experiences and problems. Among the desired information on youth labor market experiences are the employment rates of teens, both in the aggregate and across a wide array of demographic, socioeconomic, schooling and geographic subgroups, as well as their problems in securing employment, including open unemployment, hidden unemployment, and underemployment.[1] For out-of-school youth, knowledge of their access to full-time jobs, to jobs across different industries and occupations, and to employment positions providing training and offsite educational opportunities is also highly desirable to gauge changes in job quality over time.

The Jobs for America's Graduates national network (JAG) provides an array of education and employment services for high school students and for youth who have left high school before obtaining a regular high school diploma. Among the major goals of these JAG programs are having participants successfully graduate from high school, improve their employability and basic academic skills during the course of their involvement in the program, and obtain access to full-time jobs and post-secondary educational and training opportunities upon exiting from the program.

Over the past three years, the Center for Labor Market Studies has released a set of research reports for the National JAG network that examined the recent labor market problems of teens since the end of the national labor market boom in early 2001.[2] These reports identified the sharp declines in teenage job opportunities during the national recession of 2001 and the jobless recovery of 2002 as well as the paradox of persistent teen joblessness in 2004 both year-round and during the summer months despite renewed job growth and improved labor market

[1] In this research report, the employment rate of teens is represented by their employment/population ratio (E/P), the share of teens in the civilian, non-institutional population that are employed. These E/P ratios can be measured monthly and on an annual average basis. Most of the E/P measures in this report are annual averages.

[2] See:

i. Andrew Sum and Ishwar Khatiwada with Sheila Palma and Susan Perron, Still Young, Restless, and Jobless: The Growing Employment Malaise Among U.S. Teens and Young Adults, Center for Labor Market Studies, Northeastern University, Report Prepared for Jobs for America's Graduates, January, 2004.

ii. Andrew Sum, Ishwar Khatiwada, Joseph McLaughlin, The Paradox of Rising Teen Joblessness in An Expanding Labor Market: The Absence of Teen Employment Growth in the National Jobs Recovery of 2003-2004, Center for Labor Market Studies, Northeastern University, Report Prepared for Jobs for America's Graduates, January, 2005.

iii. Andrew Sum, Joseph McLaughlin, Ishwar Khatiwada, with Sheila Palma, The Summer 2005 Job Market for the Nation's Teens: Another Historically Low Employment Rate, Report Prepared for Jobs for America's Graduates, November, 2005.

conditions across the nation. This research report carries the analysis through calendar year 2005 using recently released CPS household survey data from the U.S. Bureau of Labor Statistics. Unfortunately, the findings will reveal that teens encountered a fourth year of depressed labor market conditions as teen employment rates remained at or near historical lows during 2005. In fact, the employment rate of male teens fell to a new historical low of 35.1%.[3] The lack of any substantive improvement in teen employment prospects year-round and during the summer months partly remains an unsolved mystery!

This research paper is designed to track and assess changes in employment rates for the nation's teens over both the past few years and decades to place the findings for the past few years in proper historical perspective. We will begin by describing the data sources and employment concepts and measures underlying our estimates of teen employment rates. This will be followed by a review of estimated changes in teen employment/population ratios over the 2000-2005 period together with comparisons over the past 25 years. Changes in the employment/population ratios of the nation's teens over the past five years will be compared to those for other age subgroups of the nation's working-age population over the same time period. These age comparisons will be followed by an analysis of changes in the E/P ratios of teens in gender and race-ethnic groups over the 2000-2005 period. An analysis of the employment rates of gender and race-ethnic groups by their school enrollment status follows. Changes in teen employment across geographic areas over the past five years will be examined, including the nine geographic divisions of the United States and the 28 states that participate in the Jobs for America's Graduates national youth employment network. The last two sections of this paper describe research findings on the importance of in-school work experiences and briefly discuss the need to develop new strategies to substantially boost the employment opportunities available to our nation's teenagers in the years ahead.

Data Sources and Employment Concepts and Measures

The estimates of the employment levels and employment rates of the nation's teenagers and other age subgroups appearing in this research paper are based upon the findings of the Current Population Survey (CPS). The CPS survey is a monthly national household survey

[3] The CPS teen employment series begins with 1948. Thus, reference to a historical low implies that the employment rate is the lowest observed since 1948.

conducted by the U.S. Bureau of Census for the U.S. Bureau of Labor Statistics.[4] Currently, approximately 60,000 households are interviewed each month. Data are collected on the labor force activities of each household member ages 16 and older. Each working-age individual is classified into one of the three, following mutually exclusive labor force categories: employed, unemployed, or out of the labor force. The number of employed in a given demographic subgroup (e.g., teens 16-19) can be divided by the number of persons in the civilian non-institutional population in that same group to generate a value for the employment/population ratio (E/P).[5] The E/P ratio represents the percent of the members of the civilian non-institutional population that are employed at a given point in time.[6] If there were 1,000 members in a given population group and 600 were employed, the E/P ratio would be 60 percent. The E/P ratio is influenced by both a group's labor force participation rate and its unemployment rate.[7] If members of a group stop looking for work due to poor job prospects, their behavior would actually lower the unemployment rate but would also simultaneously lower their E/P ratio. During times of depressed labor market conditions, many teens will stop looking for work, keeping their unemployment rate artificially low. Between 2000 and 2005, the annual average civilian labor force participation rate of teens fell very sharply from 52 percent to only 44 percent, a decline of slightly more than eight percentage points. In comparison, the official unemployment rate of teens is estimated to have increased from only 13.1 to 16.6 percent over the same four year period. Over this time period, the size of the teen labor force reserve increased. This is a pool of youth who report a desire for immediate employment even though

[4] For further details on the design of the CPS survey and its uses in generating monthly labor force data for the nation, See: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings, January 2004, U.S. Government Printing Office, Washington, D.C., 2004.

[5] The employed include the self-employed, independent contractors, off-the-books workers, wage and salary workers, unpaid family workers employed for at least 15 hours, and those with a job but not at work due to a temporary illness, vacation, weather conditions, or an industrial dispute at the workplace.

[6] The civilian non-institutional population excludes the homeless and those living in institutions, such as juvenile homes, jails, prisons, long-stay hospitals, mental institutions, and nursing homes. Persons serving in the nation's armed forces are also excluded from the count of the civilian non-institutional population.

[7] Algebraically, the E/P ratio can be seen to be determined by the product of the labor force participation rate and the employment rate of labor force members. The employment rate is equal to one minus the unemployment rate.

$E/P = L/P \bullet E/L$

$E/L = 1 - U/L$

Where U/L = unemployment rate
E/L = employment rate
L/P = labor force participation rate

they are not actively looking for work. The official unemployment rate for teens, thus, substantially underestimates the deterioration in the teen job market over the past four years.[8]

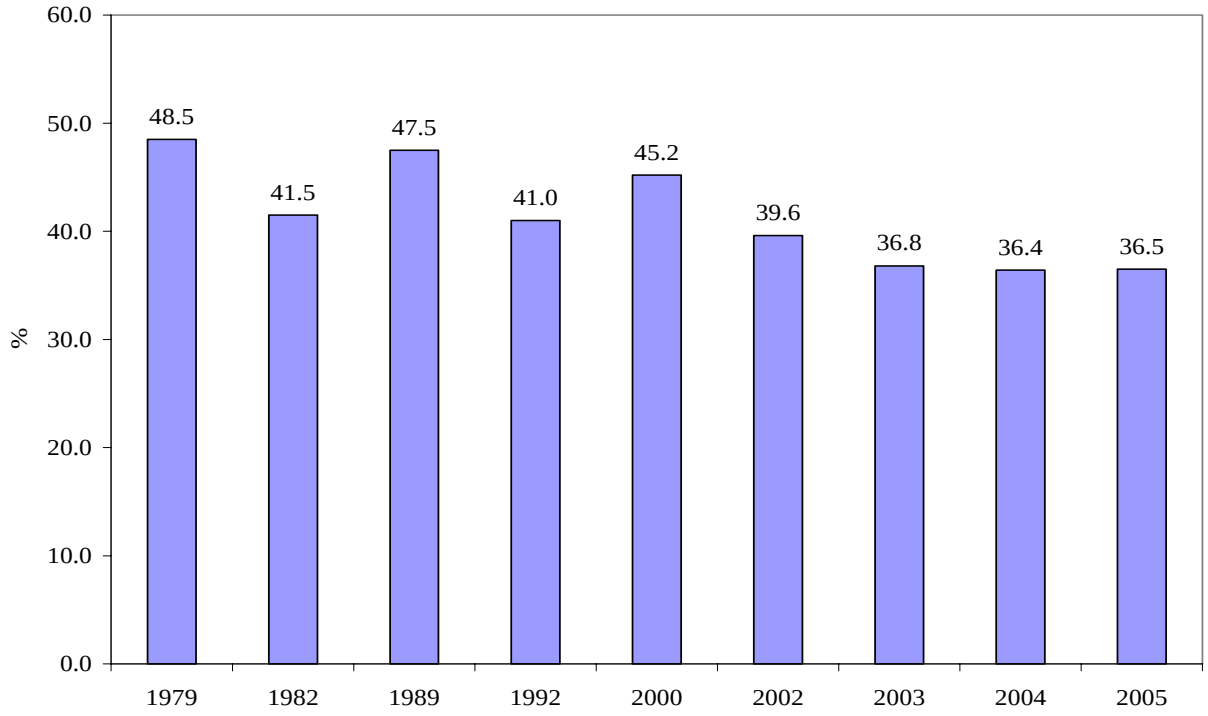
Recent and Historical Trends in Teen Employment Rates

During the labor market boom of the 1990s, the employment rate of the nation's teens rose fairly steadily from 1993 through 2000, peaking at 45.2% at the end of the decade, a gain of 4.2 percentage points from 1992 (Chart 1). It is interesting to note, however, that, despite the fact that the nation was characterized by the lowest overall unemployment rate since the late 1960s the teen employment rate in 2000 did not regain the value of 47.5% that prevailed at the end of the 1980s. Since 2000, however, the E/P ratio of the nation's teenagers has declined sharply, falling to 36.4% in 2004 and holding steady at 36.5 during 2005, representing a decline of nearly nine percentage points over this five year period (Table 1 and Chart 1). The fact that the teen employment rate fell at an above average rate during the recession of 2001 and jobless recovery of 2002 is not surprising. Similar labor market developments took place during the recession and recovery of the early 1980s and the early 1990s; however, the failure of the E/P ratio of teens to rise four years after the end of the recession of 2001 is unique. The E/P ratio of the nation's teens began to rise strongly in 1984 less than two years after the trough of the economic recession of 1982 in November of that year. During 1993, the E/P ratio of the nation's teens began to rise only two years after the end of the recession in March 1991. Yet, in the fourth year after the end of the relatively moderate recession of 2001, the E/P ratio of teens has failed to improve despite the fact that the nation's overall unemployment rate in 2005 was well below that prevailing during the early years of recovery from the 1981-1982 and 1990-1991 recessions.[9] There appear to be new structural forces at work in U.S. labor markets that are making it more difficult for teens to obtain jobs during the economic recovery. Since 2003, the number of employed civilians (16+) has increased by approximately 4 million. New payroll job growth since the early fall of 2003 has completely bypassed the nation's teenage population.

[8] Part of the problem with estimating the official unemployment rate for teens is related to the use of proxy respondents in the CPS household survey. Information on the labor force activities of teen household members is frequently provided by their mothers, who tend to underreport their job search activities, especially in periods of high unemployment. Interviews with the teens themselves tend to yield both higher employment and unemployment rates.

[9] The stronger recovery of the teen employment rate from the recession of 1982 was facilitated in part by a declining teenage population, due to the baby bust generation entering their teenaged years. The population of 16-19 year olds fell sharply from 16.695 million in 1978 to 13.84 million in 1992, a drop of 2.8 million or 17%.

Chart 1:
Trends in the Employment to Population Ratios of Teens (16-19) in the U.S., Selected Years 1989 to 2005 (Annual Averages, in %)

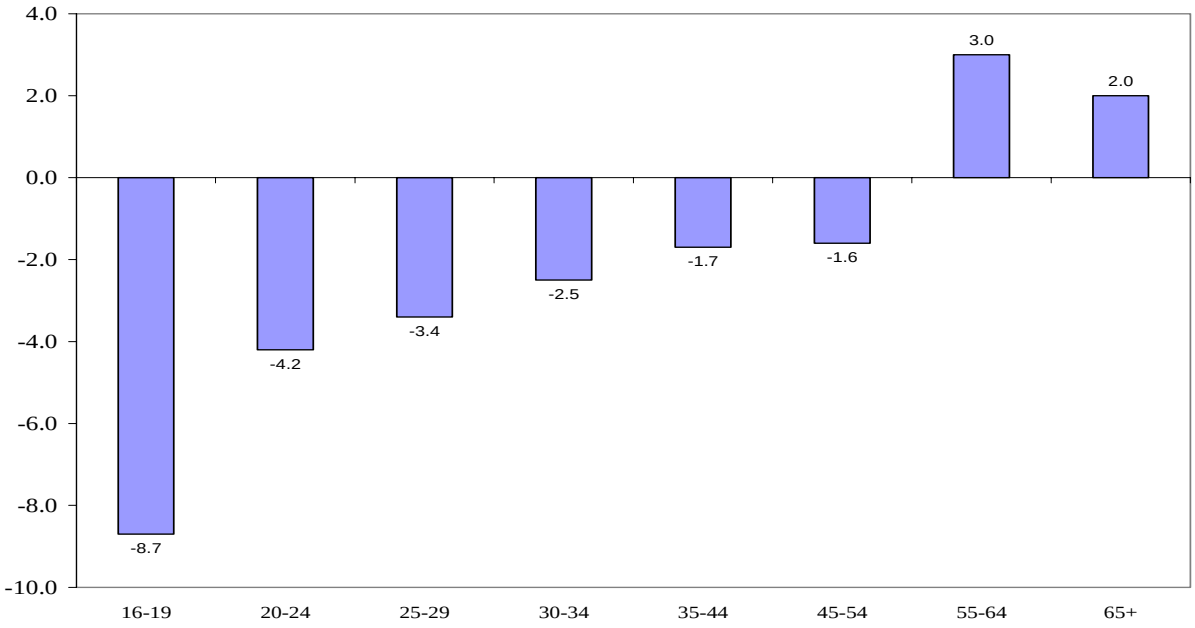


Teens have experienced dismal employment prospects over the past few years, particularly in comparison to other age groups. As noted above, the teen employment/population ratio (E/P) has dropped approximately nine percentage points since 2000. In 2005, the annual average teen E/P ratio was only 36.5 percent, down from 45.2 percent in 2000. The teen E/P ratio fell far more substantially between 2000 and 2005 than that of any other age group (Table 1, and Chart 2). Young adults between the ages of 20 and 24 experienced the second largest decline in their E/P ratio, but this decline of 4.2 percentage points was less than one-half of the decline in the teen E/P ratio. While other age groups also experienced substantive employment declines, especially those between 25 and 34 years of age, two age groups of adults were employed at higher rates in 2005. They were older workers between the ages of 55 and 64 and those 65 and over. The employment rates of these two older groups rose by 3.0 and 2.0 percentage points, respectively, over the 2000-2005 period. The size of this age twist in employment rates is historically unique.

Table 1:
E/P Ratios by Age Group in the U.S., 2000 and 2005, (Annual Averages, in %)

	(A)	(B)	(C)
Age Group	2000	2005	Percentage Point Change (Column B – A)
16-19	45.2	36.5	-8.7
20-24	72.2	68.0	-4.2
25-29	81.0	77.6	-3.4
30-34	82.0	79.5	-2.5
35-44	82.2	80.5	-1.7
45-54	80.5	78.9	-1.6
55-64	57.8	60.8	+3.0
65+	12.5	14.5	+2.0

Chart 2:
Percentage Point Changes in E/P Ratios by Age Group, U.S., 2000-2005 (Annual Averages)



Sources of the Decline in the Teen E/P Ratio, 2000-2005

As discussed above, the E/P ratio represents the number of employed teens (16-19) divided by the civilian non-institutional population for teens 16 to 19 years old. To help understand whether the decline in the teen E/P ratio was caused primarily by a reduction in teen employment or by a rise in the teenage population, we examined the changes in these two

variables between 2000 and 2005 (Table 2). Teen employment fell from nearly 7.2 million in 2000 to slightly below 6 million in 2005 or by approximately 1,200,000 teens. This represented a 17 percent decline in employment among teenagers. The teenage population grew only modestly by 486,000 teens, or 3% over this five year period. Thus, it is clear that the sharp decline in the teen E/P ratio was almost entirely due to the substantial decline in the number of employed teens and not to a sharp population increase in this age group. If the teen E/P ratio of 2000 had prevailed in 2005, there would have been another 1.43 million teens employed each month during 2005.

Table 2
Comparisons of the Employment and Population Levels of Teens in the U.S., 2000 and 2005 (Annual Averages)

	(A)	(B)	(C)	(D)
	2000	2005	Change 2000-2005	% Change 2000-2005
Employment (in millions)	7.189	5.978	-1.211	-16.8%
Population (in millions)	15.912	16.398	.486	+3.0%

Source: U.S. Bureau of Labor Statistics, website, www.bls.gov

Changes in Teen E/P Ratios by Gender and Race-Ethnic Group, 2000-2005

The above findings on teen employment developments over the past five years have focused on the employment outcomes for all teens combined. To identify how different demographic and socioeconomic subgroups of teens have fared, we have analyzed employment outcomes for gender, race-ethnic, household income, and schooling subgroups of teens. Declines in the E/P ratios of teens between 2000 and 2005 prevailed across all gender and race-ethnic subgroups of teens, but the magnitudes of these declines did vary somewhat. Male teens have experienced a steady and steeper decline in their employment opportunities since 2000 than their female peers as their E/P ratio fell by 10 percentage points. The male teen E/P ratio of 35.1% in 2005 marked a new historical low. This 35.1% employment rate was the lowest ever recorded in the 58 year history of data on teen employment statistics from the national CPS survey. Female teens also were adversely affected by changing labor market conditions, however they were employed at a higher rate than male teens in 2005, (37.8% to 35.1%). The E/P ratio for female teens in 2005 was down 7 percentage points since 2000 (Table 3). In contrast to the experiences of male teens, the E/P ratio of female teens rose modestly in 2005.

Table 3:
E/P Ratios of Teens (16 to 19) by Gender in the U.S., 2000-2005 (Annual Averages in %)

	(A)	(B)	(C)
	2000	2005	Percentage Point Change (Column B – A)
All	45.2	36.5	-8.7
Males	45.4	35.1	-10.3
Females	45.0	37.8	-7.2

Source: U.S. Bureau of Labor Statistics, website.

Teen employment rates also can be identified for four major race-ethnic groups: White, Blacks, Hispanics, and Asians. Hispanics can be members of any race though most are classified as Whites. Across our four race-ethnic groups, teen E/P ratios fell between 7 and 9 percentage points between 2000 and 2005. Black teenagers fared the worst in 2005, experiencing the lowest employment rate among the four major race-ethnic groups. The Black teen E/P ratio during the past year was only 21.6 percent. This employment rate was down by more than eight percentage points from approximately 30 percent in 2000. The Black teen E/P ratio has been in the 21.5 to 21.7 percentage point range since 2003, implying only 1 of 5 Black teens worked during an average month. This three-year average is the lowest for Black teens since the early 1980's. White teens also have fared poorly in the labor market since 2000. Their E/P ratio has fallen by approximately 9 percentage points to 40.2 percent in 2005, the steepest decline in percentage points among the four race-ethnic groups. The E/P ratio of White teens in 2005 was still approximately 19 percentage points higher than the Black teen E/P ratio and 17 percentage points greater than the E/P ratio for Asian teens. Asian teens were employed at a rate of only 23 out of every 100, which was only slightly better than their Black counterparts. During the past year, Hispanic teens had a 31.5 percent employment rate, which was down 7 percentage points from its level in 2000 (Table 4). No gender or race-ethnic group of teens was immune from the drop in overall teen job opportunities.

Table 4:
E/P Ratios of Teens 16 to 19 Years Old by Race-Ethnic Group,
U.S., 2000-2005 (Annual Averages in %)

	(A)	(B)	(C)
Race/Ethnic Group	2000	2005	Percentage Point Change (Column B- A)
White	49.1	40.2	-8.9
Black	29.8	21.6	-8.2
Hispanic	38.6	31.5	-7.1
Asian	30.7	22.8	-7.9

Teen E/P Ratios by Household Income in 2005

National, state, and local research on teen and young adult labor markets has consistently shown that teen employment rates vary considerably across household income groups and across neighborhoods based on their socioeconomic characteristics, especially the incidence of poverty problems. [10] The monthly CPS household surveys collect information on the estimated gross annual income of the households in which teens live.[11] We have used this information on household incomes to classify youth into one of the following six income categories.

- Under $20,000
- $20,000 – 40,000
- $40,000 – 60,000
- $60,000 – 75,000
- $75,000 – 100,000
- $100,000+

Estimates of teen E/P ratios during 2005 by household income status are displayed in Table 5. The findings for all 16-19 year olds reveal that the share of teens who worked during 2005 rose steadily with household income until the $100,000+ household income category was reached. On average, only 30 percent of all teens living in low income households (under $20,000) were employed in 2005. The E/P ratio of teens was 34% for those living in households with incomes between $20 and $40 thousand, rose to 40% for those with incomes between $40

[10] See: (i) William Julius Wilson, When Work Disappears, Alfred Knopf, New York, 1996; (ii) Paul A. Jargowsky, Poverty and Place: Ghettos, Barrios, and the American City, Russell Sage Foundation, New York, 1996; (iii) Andrew Sum, Neeta Fogg, and Sheila Palma, "Early Findings from the Kulick Youth Opportunity Area Demonstration for Out-of-School Youth," in Making Connections: Youth Program Strategies for a Generation of Challenge, Sar Levitan Center for Social Policy Studies, Johns Hopkins University, 1999.

[11] Household income data from the 2005 CPS Surveys were available for about 85% of the sample of teens.

and $60 thousand, and peaked at 45% for those living in households with incomes between $75,000 and $100,000.

The positive statistical association between teen E/P ratios and household incomes held true for both men and women and for Whites, Blacks, and Hispanics. Only among Asian youth, the group with the highest sampling error, was there no significant link between employment rates and household incomes during 2005. When we classify teens into categories combining their race-ethnic status and household income status, the E/P ratios varied considerably, ranging from a low of 18% among low income, Black teens to highs of 50% for upper middle income, White teens. In every household income group, White teens were more likely to work than their peers in each of the other three, race-ethnic groups.

Table 5:
Teen E/P Ratios by Household Income, All and by Gender and Race-ethnic Group, U.S: 2005
(Annual Averages in %)

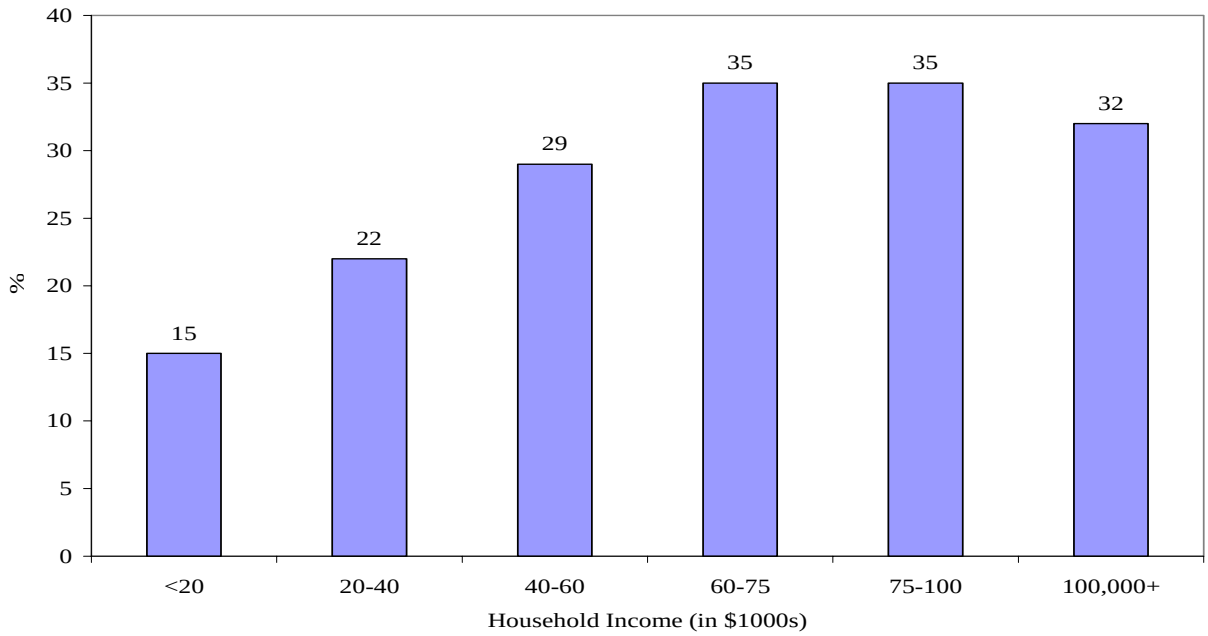
	(A)	(B)	(C)	(D)	(E)	(F)
Gender/Race-Ethnic Group	<$20,000	$20-$40,000	$40-$60,000	$60-$75,000	$75-$100,000	$100,000+
All	30.2	33.8	39.9	44.7	45.4	40.8
Men	28.2	33.5	37.9	44.6	44.9	39.7
Women	32.1	34.2	41.8	44.9	46.0	41.9
White	40.1	40.5	43.6	48.8	49.7	42.6
Black	17.8	23.9	28.0	29.0	26.7	28.4
Asian	28.2	23.9	27.6	25.2	21.3	23.3
Hispanic	27.3	29.8	36.0	40.4	34.7	36.4

Source: 2005 Monthly CPS Household Surveys, Public Use Files, tabulations by authors.

When the data for high school students are analyzed separately, very similar patterns emerge. In contrast to the predictions of neoclassical labor supply theory, high school youth from higher income families were the most likely to work in 2005 (Chart 3). The E/P ratios of high school students rose from a low of 15% among those in low income families to a high of 35 percent among those living in families with incomes between $60-$100 thousand dollars. Employment rates of high school students in the most affluent families ($100,000 or higher) were slightly lower than those in upper middle income families but twice as high as those of

teens in the low income families. Only 1 of every 7 low income high school students worked during an average month in the past calendar year. They run the greatest risk of being jobless upon graduation due to their limited work experience during high school.

Chart 3:
E/P Ratios of 16-19 Year Old High School Students by Household Income, 2005 (Annual Averages, in %)



Employment Experiences of Teens By School Enrollment Status During 2005

In this section of the paper, we will examine the employment experiences of teens in 2005 by their school enrollment status. Given the greater concerns of joblessness among out-of-school teens, we will begin our analysis with an overview of employment rates among key subgroups of out-of-school teens. Overall, only slightly more than one-half (52.6%) of teens who were not enrolled in school were employed during 2005. This E/P rate was down 8.5 percentage points since 2000. Table 6 displays E/P ratios for two categories of teens not enrolled in school: high school dropouts and those with a high school diploma. The high school graduates category includes some students who may have attended a post-secondary institution for a year or more but had not earned a degree, and were not currently enrolled in school. As can be seen, young high school graduates were far more likely to work than high school dropouts in 2005. The E/P ratio for high school graduates was 65.0%. This ratio was 25 percentage points

higher than the E/P ratio for high school dropouts, which was only 40% during that year. Male teens that were not enrolled in school had a modestly higher employment rate compared to out-of-school female teens (54.5% to 50.6%). This gender gap difference in favor of males prevailed among both high school dropouts and high school graduates.

Among race-ethnic groups, out of school White teens were most likely to be employed followed by Hispanic, Asian, and Black teens. The E/P ratio of Black teens was 20 percentage points below that of Whites.

Across all four race-ethnic groups, high school graduates were far more likely to be employed than their high school dropout counterparts. The gaps between the E/P ratios of high school graduates and high school dropouts exceeded 20 percentage points among each race-ethnic group and among both men and women. Only one in every four Black teenagers who dropped out of high school was employed in 2005. Asian teenage dropouts also had severe employment problems (26%). Black and Asian teenagers who earned a high school diploma were twice as likely to be employed as Black and Asian high school dropouts.

Table 6:
E/P Ratios of Teens 16 to 19 Years Old Not Enrolled in School by Gender and Race-Ethnic Group, Annual Averages, U.S., 2005

	(A)	(B)	(C)
Gender/Race-Ethnic Group	All Not Enrolled	High School Dropout	High School Graduate
All	52.6	40.1	65.0
Men	54.5	43.5	66.2
Women	50.6	36.4	63.8
White	56.5	44.2	68.7
Black	36.2	24.0	49.1
Hispanic	49.8	41.6	61.6
Asian	40.2	26.0	52.0

Employment Experiences of Teens Enrolled in School During 2005

The decline in job opportunities for the nation's teens also has taken a substantial toll on employment prospects for those youth enrolled in high school and college. Between 2000 and 2005, the E/P ratio of 16-19 year olds enrolled in high school or college fell 7.5 percentage points to 30.5 percent. College students were much more likely than high school students to be

employed in 2005 (Table 7). The E/P ratio of high school students (16-19) was approximately 25 percent while teenagers enrolled in college had an employment rate of 45%, which was about 20 percentage points higher than that of high school students. Only slightly more than one out of every four high school students worked on an average month during 2005, a decline of 8.5 percentage points from 2000.

The employment experiences of teens that were enrolled in school during 2005 varied substantially by gender and race-ethnic group. Among enrolled high school and college students combined, female teens had an employment rate that was 5 percentage points higher than that of males. White teens enrolled in school were twice as likely to be employed as Black teens. Among high school students, White teenagers were employed at substantially higher rates than members of the three other race-ethnic groups studied. Low income Black and Hispanic students were least likely to be employed in high school, complicating their ability to successfully transition to the labor market after graduation.

Table 7:
E/P Ratios of Teens (16-19) Enrolled in School by Type of School Attended, Gender and Race-Ethnic Group, U.S., 2005 (Annual Averages in %)

	(A)	(B)	(C)
Gender/Race-Ethnic Group	Total Enrolled	Enrolled In High School	Enrolled in College
All	30.5	25.4	45.9
Men	27.9	23.4	43.7
Women	33.2	27.6	47.7
White	34.2	28.8	49.8
Black	16.1	12.3	31.0
Hispanic	22.7	16.7	45.1
Asian	19.3	15.5	26.7

The Impact of Changing School Enrollment Behavior on the E/P Ratios of Teens

Some observers of youth labor market developments in recent years have noted that more teenagers have been enrolled in school, thereby reducing the teen employment rate since youth enrolled in high school or college are less likely to work than their peers out of school. Some of these analysts thus downplay concerns over declining teen E/P rates. During 2005, there were

approximately 12 million teens enrolled in either high school or college during a typical month, accounting for 73% of the total teen population. The number of teens enrolled in school during 2005 was up by about 1 million or 9% from 2000 (Table 8). Part of this increase in the number enrolled is due to an increase in the total teen population (16-19), but the school enrollment rate also rose by five percentage points over this time period. One can argue that the overall teen employment rate would be expected to decline somewhat as a consequence of more teens being enrolled in school than in past years. The question is how much of the decline in the teen E/P ratio can be attributed to this changing enrollment rate.

Table 8:
Changes in the Size of the Teen Population Enrolled in School, U.S., 2000-2005,
(Annual Averages, in 1000s)

	(A)	(B)	(C)	(D)
	Enrolled	Not Enrolled	Total Population	Enrolled as a percent of total population
2000	10,917	5,125	16,042	68%
2005	11,997	4,401	16,398	73%

In Table 9, we estimate what the teen employment rate would have been in 2005 if the school enrollment rate of teens had remained at its 2000 level of 68% instead of rising to 73% leaving the employment rates of both the enrolled and the non-enrolled at their 2005 values. Findings of our calculations are summarized in Table 9. If the school enrollment rate of teens had remained at its 2000 value, the teen E/P ratio in 2005 would have been 37.6% rather than the 36.5% rate actually observed during that year. This represents a difference of only 1.1 percentage points, or one-eighth of the overall change in the E/P ratio of teens between 2000 and 2005. Changing school enrollment behavior was, thus, not the key factor reducing the teen employment rate over this five year period. The deterioration in job prospects for both the enrolled and non-enrolled was the dominant factor at work. It also should be noted that part of the rise in the teen school enrollment rate can be attributed to poor labor market conditions that encouraged teens to stay in school, or to return to school, and withdraw from the labor force. Thus, one cannot assume that teens enrolled in school do not wish to work. Many teens enrolled in school also work or would like to work, and they receive important economic benefits in their later teen years and early 20's from this early work experience.

Table 9:
Estimated Teen E/P Ratio in 2005 If the 2000 School Enrollment Ratio Had Prevailed (in %)

	(A)	(B)	(C)
School Enrollment Group	Hypothetical % of Teens in Group	E/P Ratio in 2005	Weighted Contribution to E/P Ratio
Enrolled in School	68.0	30.5	20.7
Not Enrolled in School	32.0	52.6	16.8
Hypothetical E/p Ratio in 2005			37.6
Actual E/P Ratio in 2005			36.5
Hypothetical - Actual			+1.1

How Did Teen Employment Rates in 2000 and 2005 Vary by Geographic Division and Across Individual JAG States?

Teen employment rates typically have varied quite widely across geographic regions, states, metropolitan areas, central cities, and neighborhoods within cities.[12] This section of the paper examines how teen E/P ratios varied across geographic divisions and individual states over the past five years. The U.S. Census Bureau divides the nation into nine geographic divisions. A listing of the states that comprise each geographic division is available in Table 10. In 2005, these E/P ratios ranged from a low of 32.6 percent in the West South Central division to a high of 50.0 percent in the West North Central. Five of the nine divisions had employment rates in 2005 equal to or below 35.0 percent. In comparison, none of nine geographic divisions had a teen employment rate below 40.0 percent during 2000. Table 11 shows the estimated changes in the employment to population ratios of teens residing in each of the nine geographic divisions between 2000 and 2005. Teen E/P ratios declined in all nine divisions over this time period. The size of these declines ranged from a low of 5.4 percentage points in the Mountain division to a high of 11.2 percentage points in the East North Central division of the Midwest, which includes three JAG states.

[12] See: Andrew Sum, Neeta Fogg, and Garth Mangum, Confronting the Youth Demographic Challenge: Labor Market Prospects of Out-of-School Youth, Sar Levitan Center for Social Policy Studies, Johns Hopkins University, Baltimore, 2000.

Table 10:
A Listing of the States That Make Up Each of the Nine Geographic Divisions

Geographic Divisions	States
New England	ME, VT, NH, MA, CT, RI
Middle Atlantic	NY, NJ, PA
East North Central	IL, IN, MI, WI, OH
West North Central	IA, KS, MN, MO, NE, ND, SD
South Atlantic	DE, FL, GA, MD, NC, SC, VA, WV (includes D.C.)
East South Central	AL, KY, MS, TN
West South Central	AR, LA, TX, OK
Mountain	AZ, ID, CO, MT, NV, NM, UT, WY
Pacific	CA, WA, OR, AK, HI

Table 11:
Change in the E/P Ratios of Teens (16-19) in the Nine Geographic Divisions of the U.S., 2000-2005 (Annual Averages in %). Ranked by Percentage Point Changes in Their E/P Ratios

	(A)	(B)	(C)
Geographic Division	2000	2005	Percentage Point Change (Column B- A)
East North Central	52.7	41.5	-11.2
South Atlantic	43.8	35.0	-8.8
West North Central	58.8	50.0	-8.8
West South Central	41.3	32.6	-8.7
New England	49.5	42.1	-7.4
East South Central	41.3	34.6	-6.7
Middle Atlantic	40.6	34.2	-6.4
Pacific	40.0	33.6	-6.4
Mountain	48.5	43.1	-5.4

Changes in the annual average E/P ratios of teens between 2000 and 2005 also were estimated for 28 individual states participating in the Jobs for America's Graduates (JAG) network. In 2005, employment to population ratios of teens varied substantially across JAG states, ranging from lows of 28 percent in Mississippi and 31 percent in Alabama to highs of 53 percent in Minnesota and 54 percent in Iowa. However, teen E/P ratios fell considerably from 2000 to 2005 in most of these states. Overall, only 3 of these 28 states had teen employment to population ratios equal to or above 50 percent in 2005, and only about one-half of them had teen E/P ratios over 40%. In 2000, only 6 of these 28 JAG states, or about 20% had E/P ratios below 40%. Over the 2000 to 2005 time period, there were only two states in the entire country where teen E/P ratios increased. They were Alaska and Hawaii, neither of which is in the JAG

network. Of the 48 states in the nation with declining teen E/P ratios over this time period, 23 states had declines in their E/P ratios equal to or greater than 8 percentage points. Clearly, rising teen joblessness was not concentrated among a handful of states or large cities. Almost every state in the country has experienced decreased employment among its teenagers over the past five years, and in many states these declines were quite considerable.

Table 12:
Changes in the E/P Ratio of Teens (16-19) in Individual JAG States, 2000-2005, (Annual Averages, in %) (States Ranked by Size of Percentage Point Decline)

	(A)	(B)	(C)
State	2000	2005	Percentage Point Change (Column B- A)
Georgia	45.3	31.3	-14.0
Illinois	47.9	36.3	-11.6
New Hampshire	58.8	47.4	-11.4
Minnesota	63.6	53.3	-10.3
Iowa	64.0	54.4	-9.6
New Jersey	41.7	32.6	-9.1
Mississippi	37.1	28.0	-9.1
Arkansas	42.9	34.0	-8.9
Florida	43.3	34.9	-8.4
Tennessee	45.9	37.8	-8.1
Ohio	52.2	44.4	-7.8
Arizona	46.7	39.7	-7.0
Wisconsin	60.4	53.6	-6.8
Delaware	47.9	41.7	-6.2
Massachusetts	47.1	40.9	-6.2
Connecticut	45.3 (1999)	39.2	-6.1
Colorado	48.8	42.8	-6.0
Maine	49.7	43.9	-5.8
Kentucky	44.3	38.6	-5.7
Pennsylvania	45.4	39.8	-5.6
California	37.9	32.6	-5.3
Alabama	36.1	31.0	-5.1
New Mexico	39.8	35.3	-4.5
West Virginia	36.1	31.9	-4.2
Virginia	46.5	42.4	-4.1
Rhode Island	48.7	45.8	-2.9
Louisiana	36.2	34.5	-1.7
Montana	47.7	46.8	-0.9

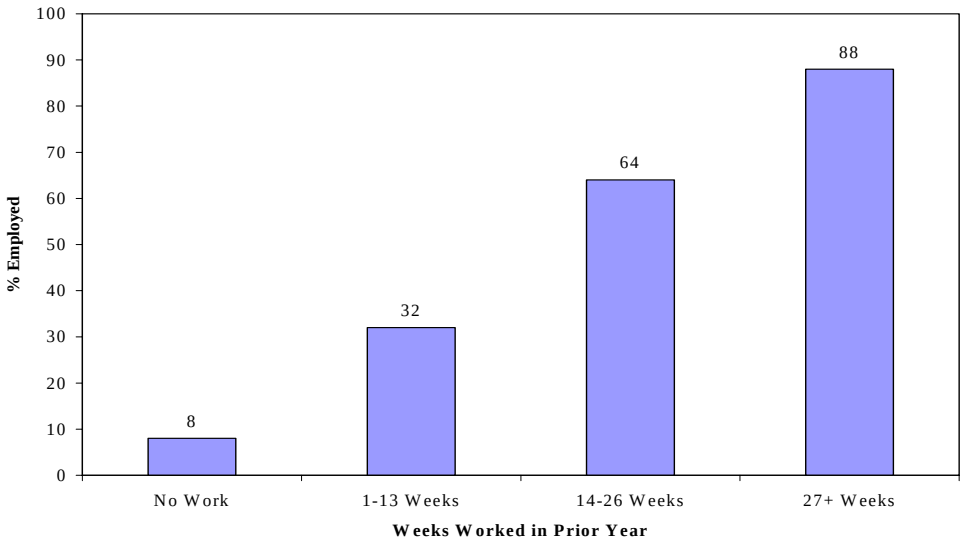
Source: The data for 2000 is from published tables in the Geographic Profile of Employment and Unemployment, 2000, U.S. Bureau of Labor Statistics website.

Path Dependency of Teen Employment: The Positive Effects of Early Work Experience

The employment behavior of teens is characterized by strong path dependency; i.e., the employment status of teens in time period (t + 1) is strongly linked to their job status in time period t. Teens who work more in a given year (i.e. 2004) are more likely to be working the following year, 2005. To illustrate the nature of these employment relationships, we cross-tabulated the employment status of 16-20 year old high school students in March 2005 by their employment experiences in the prior calendar year; i.e., 2004. Each high school student in March 2005 was assigned to one of the following four mutually exclusive employment categories: did not work at all in the prior year, worked 1-13 weeks, worked 14-26 weeks, and worked 27 or more weeks during the year.

The employment rates of these high school students in March 2005 varied markedly by their weeks of work experience in the prior calendar year. Among those 16-20 year olds with no reported weeks of paid employment in 2004, only 8% were working at the time of the March 2005 CPS survey (Chart 22). If they had worked for 1-13 weeks in the previous year, then their employment rate would rise to 32 percent. Of those with more than six months of paid employment in 2004, 88 percent were employed at the time of the March 2005 survey. The employment rate of this last group of high school students with substantive work experience in the prior year was eleven times higher than that of their peers with no paid employment during 2004.

Chart 4:
Percent of 16-20 Year Old High School Students Who Worked in March 2005 by Number of Weeks Worked in Previous Calendar Year



The strong time path dependence of employment among all high school students combined holds true among men and women, each major race-ethnic group, and family income group.[13] Findings for key race-ethnic groups of high school students are displayed in Table 21. For members of each of these four groups, only a very small percent (5 to 10 percent) of those with no paid employment in 2004 were working at the time of the March 2005 CPS survey. Employment rates of these four groups rose very strongly with the amount of their paid employment in the prior calendar year. Between 80 and 93 percent of those teens with more than six months of employment in the prior year were employed in March 2005. Each of these four groups of students with substantial work experience in 2004 were eight to seventeen times more likely to be employed in March 2005 than their peers with no weeks of paid work in the prior year. Work experience among teens clearly begets more work experience. A type of "Matthew effect" cited by some researchers in the literacy field also appears to prevail in the youth labor market.[14] These same types of behaviors also prevail in the labor market for young adults in

[13] Findings from the NLS97 longitudinal surveys of youth also show strong path dependence in employment of teens from age 14 onward.
See: U.S. Department of Labor, Bureau of Labor Statistics, Employment of Teenagers During the School Year and Summer, Washington, D.C., 2004.

[14] In the literacy field, some researchers including Keith Stanovich of the University of Toronto refer to the cumulative effects of a weak base of literacy skills as the "Matthew effect" from the Biblical dictum, that "the rich get richer and the poor get poorer." See: (i) Keith Stanovich, "Matthew Effects in Reading: Some Consequences of Individual Differences in the Acquisition of Literacy," Reading Research Quarterly, Vol. 21, 1986, pp. 360-406; (ii) John Comings, Andrew Sum and Johan Uvin, New Skills

their 20s. Cumulative work experience has very substantial effects on the wages and annual earnings of young men and women,[15] and the expected economic returns from work experience influence the decision of men and women to actively participate in the labor force.[16] These developments have created a "Catch 22" type of problem for young adults. Those who acquire limited work experience in their late teens and early 20s cannot command high wages in the labor market, and their limited wage prospects reduce the economic incentive for them to participate in the labor market. The less work today, the lower the expected wage tomorrow.

Table 13:
Percent of 16-20 Year Old Asian, Black, Hispanic, and White, non-Hispanic High School Students Who Worked in March 2005 by Weeks Worked in the Previous Calendar Year

	Employment Rate			
	(A)	(B)	(C)	(D)
Weeks Worked in Prior Year	Asian	Black	Hispanic	White
0	5.3	5.5	5.2	10.1
1-13	27.0	32.6	37.4	40.3
14-26	60.9	60.6	59.7	65.3
27+	92.7	89.3	80.4	88.1
All	16.5	15.4	17.2	32.2

Source: March 2005 CPS Survey, Work Experience and Income Supplement, tabulations by authors.

Labor Force Underutilization Problems Among Teens

An understanding of the behavior and forces underlying the steep decline in teen E/P ratios in recent years is indispensable for policymaking at the national, state, and local level. Why are so many fewer teens working in recent years? During the past few years, some reporters in the news media have written stories that attributed the decline in teen employment, especially during the summer months to teens' lack of desire to work.[17] Some of the views

for A New Economy: Adult Education's Key Role in Sustaining Economic Growth and Expanding Opportunity, Massachusetts Institute for A New Commonwealth, Boston, 2000.

[15] See: John Bishop, "Achievement, Test Scores, and Relative Wages," in Workers and Their Wages, (Editor: Marvin H. Kosters), American Enterprise Institute, Washington, D.C., 1991.

[16] See: Stephanie Aaronson, Looking Ahead: Young Men, Wage Growth, and Labor Market Participation, Ph.D. Dissertation, Columbia University, 2000.

[17] For examples of such articles, see:

(i). David Cho, "Working on Nothing but a Tan: Many Teenagers Decide They Can Do Without Summer Jobs," The Washington Post, June 16, 2002, p. C1; (ii) "More Teens Shun Summer Jobs," CNN web site, July 7, 2002; (iii) Leigh-Ann

expressed in these articles said that many teens choose not to work and prefer concentrating on their academic coursework during the school year or working on their tans during the summer months. The question on whether teens really want to work cannot be answered alone by official unemployment statistics. The labor force participation behavior of teens is cyclically sensitive, declining during periods of rising unemployment and jobless recoveries. If teens sense that jobs are not available, they will stop actively looking for work and no longer be counted as unemployed in the CPS survey, even though many of these teens would be willing to accept jobs if they were offered to them. To identify whether a growing lack of interest in work was a factor underlying the drop in the teen E/P ratio, the authors analyzed the CPS public use files for the 2005 monthly surveys to estimate the number of teens who were unemployed, underemployed, or members of the "labor force reserve" sometimes referred to as the hidden unemployed.

- The unemployed are teens who were reported to be actively looking for work and available for work but jobless at the time of the CPS survey.
- The hidden unemployed or the labor force reserve are those who reported that they wanted a job at the time of the survey but were not actively looking for work, thus, they were not categorized as unemployed.
- The underemployed are those teens who were working part-time but desired full-time employment. The bulk of the underemployed teens are out-of-school youth who work on average about 20-21 hours per week.

Estimates of the number of teens that fell into one of these labor market problem categories during 2005 are presented in Table 14. Slightly over 1.2 million teens were unemployed on an average month in 2005. The number of unemployed males outnumbered unemployed females by 146,000 or nearly 30%. There were a total of approximately 929,000 teens that were in the labor force reserve. Male teens accounted for 54% of the teens in this underutilized group. If all of the unemployed and hidden unemployed had been able to find work in 2005, the E/P ratio of teens would have been approximately 49%, or 12.5 percentage points above the actual rate during that year. In addition to the unemployed and hidden unemployed, another 336,772 teens that were working part-time indicated that they would have preferred a full-time job. The sum of the official unemployed, hidden unemployed, and underemployed

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Jackson, "The Elusive Summer Job," The Austin American Statesman, July 29,2002, p. F1. (iv) Stephanie Armour, "Record Teens Just Say No to Summer Jobs," USA Today, June 24, 2002.

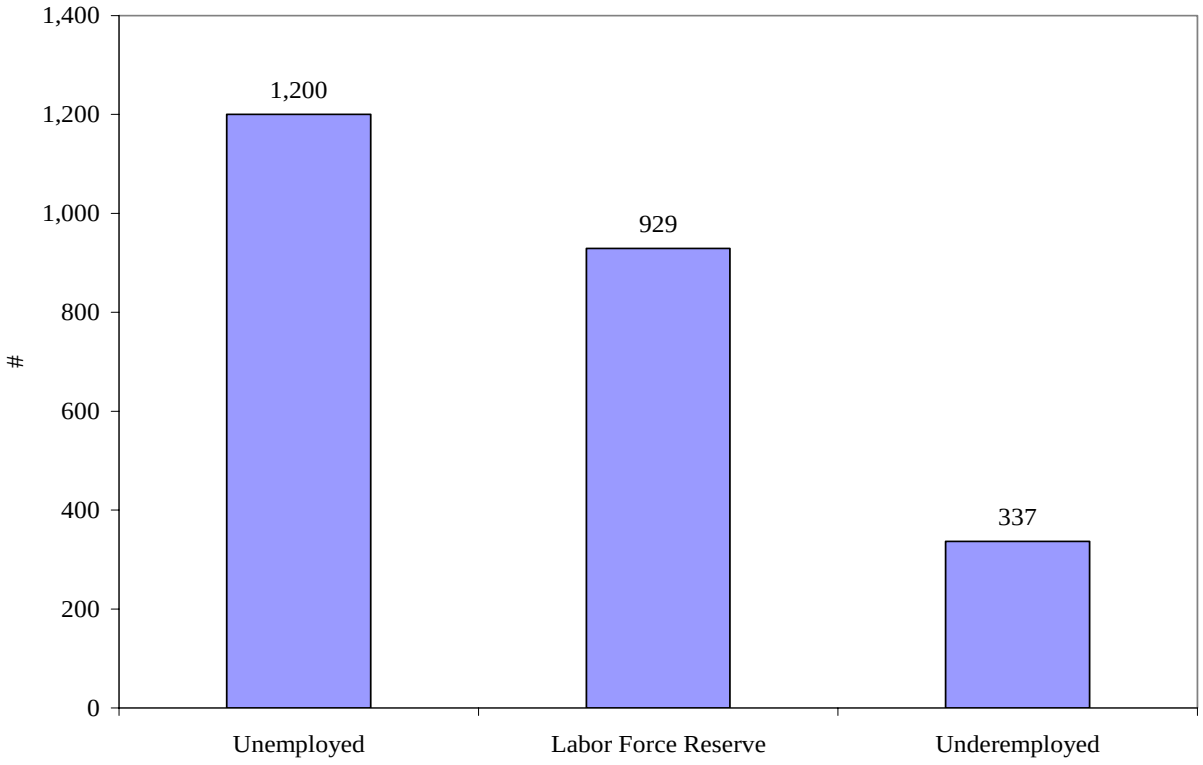
represents the number of underutilized teens, which was just under 2.5 million or 30% of the adjusted teen labor force.[18] The underutilization rate for male teens was about five points higher than that of female teens, helping explain the rising gender gap in teen E/P ratios. The sheer size of the pool of underutilized teens indicates that the decline in teen employment cannot be explained simply by teens' lack of desire to work. There has been a growing pool of teens unable to obtain any work or only able to find part-time jobs even though they wish to work full-time. These full-time jobs provide higher future returns in the form of higher wages and are much more likely to provide training opportunities.

Table 14:
Number and Percent of 16-19 Year Olds Who Were Unemployed, Hidden Unemployed, or Employed Part-Time for Economic Reasons During 2005, U.S. (Annual Averages)

(A)	(B)	(C)	(D)
Labor Market Category	**Males**	**Females**	**Total**
Civilian Labor Force	3,696,216	3,634,302	7,330,518
Unemployed	673,318	527,056	1,200,374
Labor Force Reserve	503,849	424,954	928,803
Working Part-Time for Economic Reasons	180,258	156,514	336,772
Adjusted Labor Force (Labor Force + Labor Force Reserve)	4,200,065	4,059,256	8,259,321
Number of Underutilized Teens	1,357,425	1,108,524	2,465,949
Underutilization Rate (Underutilized Teens/Adjusted Labor Force)	32.3	27.3	29.9

[18] The adjusted teen labor force includes the labor force reserve as well as the official civilian labor force.

Chart 5:
Number of Teens That Were Unemployed, in the Labor Force Reserve, and Underemployed On An Average Month in 2005, (Annual Averages in 1,000s)



Summary and Conclusions

This research report has provided a comprehensive assessment of changes in the employment rates of teens across the nation over the past five years. A summary of key findings and their implications for the design and operation of future JAG school-to-work programs is presented below.

(i) Teens have faced a steep deterioration in their job prospects over the past five years. Since 2000, the E/P ratio of the nation's teenagers has declined by approximately 9 percentage points, falling sharply to 36.8% in 2003 and remaining at this historically low level through 2005 (36.5%). The fact that the teen E/P ratio has not improved in the fourth year after the moderate economic recession of 2001 even though the nation's unemployment rate is relatively low compared to its level in the past two economic recoveries is puzzling. There appear to be new structural forces at work in U.S. labor markets that are making it more difficult for teens to obtain jobs.

(ii) The teen E/P ratio fell far more substantially between 2000 and 2005 than that of any other age group. While other age groups also experienced substantive employment declines, especially those between 20 and 34 years of age, two age groups of adults were employed at higher rates in 2005 than they were in 2000. They were older workers between the ages of 55 and 64 and those 65 and over. The employment rates of these two older groups rose by 3.0 and 2.0 percentage points, respectively, over the 2000-2005 period. The size of this age twist in employment rates is historically unique.

(iii) The steep drop in the E/P ratio of teens between 2000 and 2005 was caused by a combination of an increase in the teen unemployment rate and a decline in the civilian labor force participation rate of teenagers. The decline in the civilian labor force participation rate of teenagers from 2000 to 2005 was 8 percentage points, a far greater decrease than that earlier projected by the U.S. Bureau of Labor Statistics.

(iv) The declines in the E/P ratios of the nation's teens between 2000 and 2005 were widespread across both gender groups and each of four race-ethnic groups. Male teens experienced a larger decline in their E/P ratio than women (10.3 vs. 7.2 percentage points). In 2005, the E/P ratio of male teens had declined to 35%, a new post-World War II low. The employment rates of teens in each of the four race-ethnic groups declined by 7 to 9 percentage points between 2000 and 2005. During the latter year, the E/P ratios of teens varied markedly across the four race-ethnic groups, ranging from a low of slightly under 22% among Blacks to a high of 40% among Whites. Boosting the employment rates of Black and Hispanic teens as well as those of low income Whites should be a major priority for the JAG network.

(v) Employment rates of both teens enrolled in school and those out-of-school declined sharply between 2000 and 2005. During 2005, only 1 of every 4 teenaged high school students (16-19) was working. The E/P ratios of these high school students also varied considerably across race-ethnic groups and household income groups. Only 12% of all Black high school students and 1 of 6 Hispanic high school students worked on average during the school year. Among both Black and Hispanic high school students, employment rates in 2005 were lowest among those residing in households with incomes under $20,000. The more limited work exposure of high school students, especially race-ethnic minorities and youth from low income households, will exacerbate their difficulties in transitioning to the labor market upon graduation and reduce their short-term wage prospects when they do get hired. JAG career specialists should

make concerted and sustained efforts to boost the employment rates of program participants prior to graduation from high school.

(vi) Among out-of-school teens, high school graduates were far more likely to work than high school dropouts in 2005. The E/P ratio for young high school graduates was 25 percentage points higher than the E/P ratio for young high school dropouts. Across all four race-ethnic groups, the E/P ratio of high school graduates exceeded that of high school dropouts by at least 20 percentage points. Only 24% of Black teen dropouts were at work in 2005.

(vii) Teen employment rates declined considerably in each of the nation's nine geographic divisions over the past five years, but the size of these percentage point drops in teen E/P ratios varied from a low of 5 percentage points in the Rocky Mountain region to a high of 11 percentage points in the East North Central division of the Midwest (which is comprised of the states of Indiana, Illinois, Michigan, Ohio, and Wisconsin). In 48 of the 50 states and the District of Columbia, teen employment rates fell between 2000 and 2005; however, the size of these percentage point declines among the 28 states in the national JAG network ranged from lows of 1 to 2 percentage points in Montana and Louisiana to highs of 11 to 14 percentage points in New Hampshire, Illinois, and Georgia.

(viii) Between 2000 and 2005, a higher share of the nation's teens were enrolled in high school and college, both during the regular school year and during the summer months. In 2005, on average, 73% of all 16-19 year olds were enrolled in school, up by nearly five percentage points from 2000. The increased school enrollment rate by itself would have been expected to lower the E/P ratio of all teens by a little more than one percentage point due to lower employment rates among students. The overwhelming portion of the decline in the teen E/P ratio over the past five years was due to a steep drop in job prospects for both enrolled and out-of-school youth not to a rise in the school enrollment rate. While having more youth remain in school is clearly desirable, part of the rise in school enrollment was attributable to a substantially weakened labor market for teens that reduced the opportunity costs of staying in school.

There is a clear and overwhelming need to boost the job prospects of both teens enrolled in school and those out of school, especially high school dropouts and low income high school graduates.