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The Projected Summer 2007 Job Outlook for the Nation's Teens and the Implications of Summer Employment for Jobs for America's Graduates' Programs

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Jobs for America's Graduates
Alexandria, Virginia

April 2007

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Introduction

During the past few years, the Center for Labor Market Studies of Northeastern University has been engaged in a diverse array of research activities focused on changing labor market conditions for the nation's teens and young adults (those 16-24 years old) from the late 1980s to the present.[1] Employment rates for the nation's teens fell considerably from 2000 through 2004 and remained at low levels for most of the past two years despite relatively strong overall job growth. The annual average employment rates for the nation's teens in 2004 and 2005 were the lowest in the last 57 years. Among the objectives of this research project is that of providing updates on changing youth labor market conditions to guide the formulation of future workforce development policies for teens, recent high school graduates, and other out-of-school young adults under the age of 25. Last year, we prepared two research papers on the projected summer 2006 job outlook for the nation's teenagers and their actual summer employment experiences during that year.[2] This research paper is designed to describe and assess changes in summer employment outcomes for teens (16-19) in the U.S. from the summer of 2000 through 2006. It also will provide a projected job outlook for the nation's teens during the forthcoming summer of 2007 and review research findings on the impact of early post high school summer work experiences of JAG graduates from the Class of 2003 on their fall 2003 and spring 2004 employment status.

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[1] For a review of changing labor market conditions for teens and young adults in the U.S. from the end of the labor market boom in 2000 through early 2004, See:
(i) Andrew Sum, Ishwar Khatiwada with Sheila Palma, 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 the Jobs for America's Graduates Network, Alexandria, Virginia, 2004; (ii) Andrew Sum, Tim Barnicle, Ishwar Khatiwada, Joseph McLaughlin with Sheila Palma, Educational and Labor Market Outcomes For the Nation's Teens and Young Adults Since the Publication of America's Choice: A Critical Assessment, Center for Labor Market Studies and National Center on Education and the Economy, January 2006; (iii) Andrew Sum, Joseph McLaughlin, Ishwar Khatiwada with Sheila Palma, Left Far Behind in the Labor Market: The Collapse of the Teen Job Market in the Industrial Midwest, Center for Labor Market Studies, Northeastern University, Report Prepared for the Alternative Schools Network, Chicago, Illinois, February 2006.

[2] See: (i) Joseph McLaughlin, Andrew Sum, Neeta Fogg, with Ishwar Khatiwada and Sheila Palma, The Summer Teen Job Market in 2005 and the Predicted Outlook for 2006: Implications of Summer Employment for Jobs for America's Graduates' Programs, Center for Labor Market Studies, Northeastern University, Report Prepared for the National JAG Network, Alexandria, Virginia, April 2006; (ii) Andrew Sum, Joseph McLaughlin, Ishwar Khatiwada, The 2006 Summer Job Market for the Nation's Teens: Who Got the Jobs and Who Didn't and Why We Should Care?, Report Prepared for the Jobs for America's Graduates Network, Alexandria, Virginia, September 2006.

Data Sources and Key Employment Concepts and Measures

Most of the data on teen employment rates and labor market problems appearing in this research report are based upon the findings of the Current Population Surveys (CPS), a monthly national household survey conducted by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics.[3] The CPS survey involves interviews with a nationally representative sample of approximately 60,000 households across the nation each month. Labor force data are collected for all household members 16 and older.

To be classified as employed in the CPS household survey, an individual must meet one of the following three criteria: worked for pay or profit for 1 or more hours in the reference week (i.e., the calendar week immediately preceding the survey), was temporarily absent from a job for such reasons as illness, personal vacation or bad weather, or worked without pay for 15 or more hours in a family owned business. The employment rate for teens as defined in this paper is the ratio of the number of estimated employed teens to the number of teens in the civilian, non-institutional population.

Parts of the findings in this paper also are based on intake records and follow-up surveys for participants in JAG Senior Year Programs for the Class of 2003. Employment behaviors of these youth in high school and during the summer months immediately following graduation in 2003 will be used to predict their employment status in the fall of 2003 and the spring of 2004.

Recent Trends in the Summer Employment Rates of the Nation's Teens

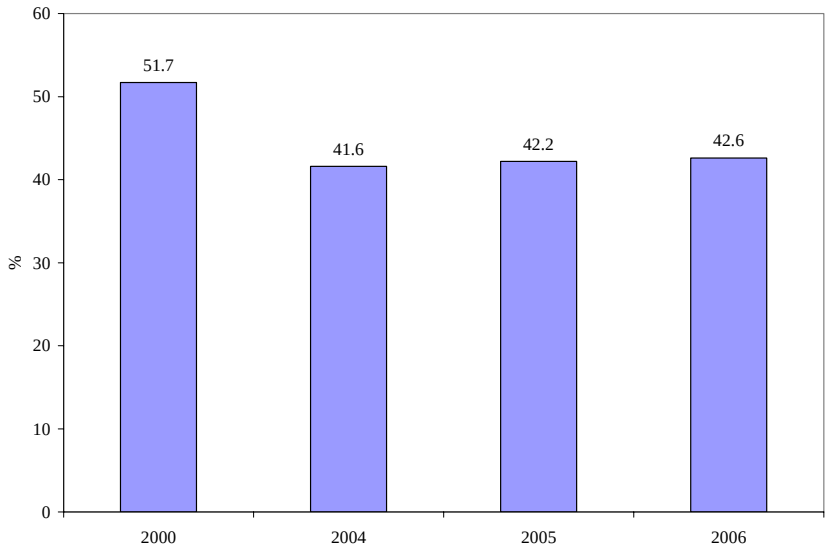
Following the end of the 1990's national labor market boom in early 2001, the labor market for the nation's teens deteriorated considerably over the next four years. Employment opportunities fell far more sharply for teens than for any other age group, and they have not improved to any substantive degree over the past three years (2004-2006) despite renewed wage and salary job growth across the country. The average, year-round teen employment rate (36.6%) in the past three years (2004-2006) was the lowest in the past 60 years.

The summer job market for the nation's teens also has been substantially depressed in recent years. In the summer of 2000 (June-August), nearly 52 of every 100 teens (16-19 years

[3] For a review of key design features of the CPS household survey and the underlying labor force concepts and measures, see:
U.S. Bureau of Labor Statistics, *Employment and Earnings*, January 2005, "Appendix A," U.S. Government Printing Office, Washington, D.C., 2005.

old) were employed during a typical month.[4] The summer employment rate for teens fell steadily and strongly over the following four years, declining to a new historical low of 41.6 percent in 2004 before modestly improving last summer to 42.6%.

Chart 1:
Trends in the Summer Employment Rates of Teens in the U.S., Selected Summers, 2000 to 2006
(in %, not seasonally adjusted)

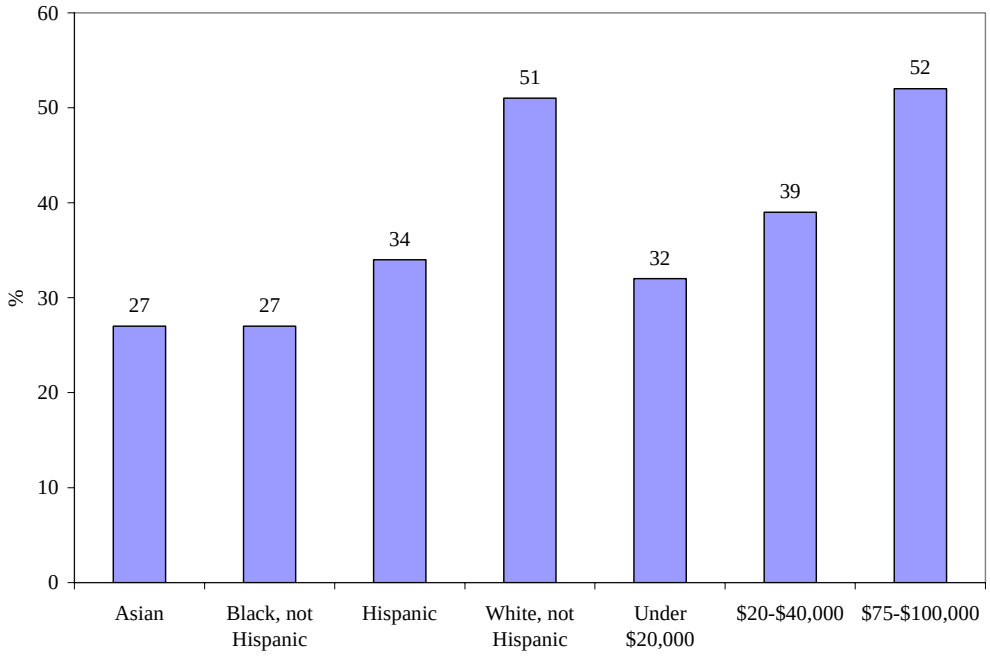


Who Worked During the Summer of 2006? Variations in National Teen Employment Rates

Job opportunities for teens during the summer months varied widely across race-ethnic and family income groups, as well as geographic regions, states, and cities. Slightly over one-half of all White, non-Hispanic teens were employed versus only one-third of Hispanic teens and only slightly more than one-fourth of Black teens (Chart 2). Those teens living in low income families (an income under $20,000) were least likely to be working (32%) while those residing in households with incomes between $75,000 and $100,000 were the most likely to be employed (52%). Only one-third or fewer of the youth living in California, D.C., New York, Alabama, and Mississippi held jobs during the past summer versus 60% or more of those teens residing in New Hampshire, Idaho, Iowa, Nebraska, and South Dakota.

[4] These summer employment rates for teens are the average employment/population ratios for these three months not seasonally adjusted. The teen E/P ratio represents the share of the nation's teens in the civilian, non-institutional population that were employed during a given month. An E/P ratio of 42 percent implies that 42 of every 100 teens were working during this time period.

Chart 2:
Summer 2006 Employment Rates of U.S. Teens by Race-Ethnic Group and Selected Family Income Group (in %)



Who Worked in the 29 JAG States During the Summer of 2006? Variations in Teen Employment Rates

What were the summer labor market experiences of teens in the 29 states operating JAG programs? Changes in the summer employment rates of teens in each of the JAG states between 2000 and 2006 also were estimated to determine how the labor market for teens has changed in these states over this six year period. We also analyzed employment data for teens residing in JAG states during the past summer by their age, gender, race-ethnicity, and household income groups.

Between 2000 and 2006, teen summer employment rates declined in every JAG state (Table 1). However, the magnitude of these employment changes varied considerably across these states. Approximately 11 states had double digit declines in teen summer employment rates while five states had teen employment rate drops of less than 4 percentage points. Teen summer employment rates in two mid-western states, Indiana and Illinois, were characterized by the steepest declines among the 29 JAG states over the past six years. Employment rates declined by

17 to 18 percentage points in these two states. They were followed by three southern states (Georgia, South Carolina, and Alabama) that also had substantial declines in teen E/P ratios. Despite falling teen summer employment rates, several JAG states were national leaders in providing teen summer employment. Iowa, Wisconsin, Montana, and Minnesota had some of the highest teen summer employment rates in the country during the summer of 2006.

Table 1:
Rankings of the 29 JAG States by Percentage Point Changes in Teen Summer Employment Rates Between 1999-2000 and 2005-2006

	(A)	(B)	(C)	(D)
Rank	State	1999-2000 Average	2005-2006 Average	Percentage Point Change
1	Indiana	61.7	43.7	-18.0
2	Illinois	58.9	42.1	-16.8
3	Georgia	49.7	34.2	-15.5
4	South Carolina	51.3	37.3	-14.0
5	Alabama	45.0	31.5	-13.5
6	West Virginia	43.9	30.7	-13.2
7	New Hampshire	70.4	57.3	-13.1
8	Tennessee	57.0	45.6	-11.4
9	Mississippi	41.1	30.7	-10.4
10	Ohio	59.6	49.7	-9.9
11	Florida	46.6	36.8	-9.8
12	New Jersey	50.3	41	-9.3
13	Missouri	62.5	54.2	-8.3
14	Iowa	70.3	62.4	-7.9
15	Minnesota	71.4	64.3	-7.1
16	Arkansas	47.7	40.9	-6.8
17	Kentucky	52.2	45.4	-6.8
18	Delaware	57.8	51.4	-6.4
19	Wisconsin	69.7	63.8	-5.9
20	Colorado	53.7	48.8	-4.9
21	Massachusetts	61.7	56.9	-4.8
22	Arizona	48.3	43.8	-4.5
23	New Mexico	41.5	37.1	-4.4
24	Louisiana	41.8	37.7	-4.1

25	Connecticut	54.9	51.8	-3.1
26	D.C.	31.8	28.9	-2.9
27	Maine	61.8	59.1	-2.7
28	Montana	61.6	60	-1.6
29	Virginia	51.1	50.7	-0.4

Younger teens (16-17 year olds), especially race-ethnic minorities, residing in JAG states had much lower employment rates than their older peers. The employment rate of teens 16 and 17 years of age in JAG states was only 34% versus an employment rate of nearly 58% for all 18-19 year olds in those same states. Young male and female teens (16 to 17 years of age) in JAG states had the same rate of employment this past summer. Across race-ethnic groups, young White teens were twice as likely to be employed as their counterparts in other three race-ethnic groups. Less than one in five young Black, Hispanic, and Asian teens in JAG states held a job during the summer of 2006.

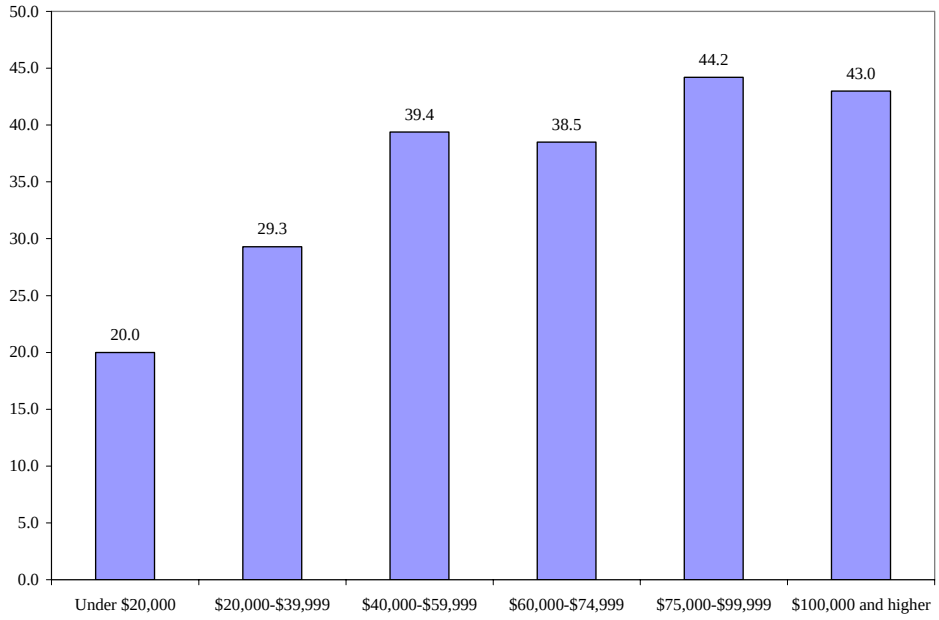
Table 2:
Summer Employment Rates of Young Teens (16-17) by Gender and Race-Ethnicity

	(A) Total	(B) Men	(C) Women
All	34.3	34.3	34.3
Asian	15.4	20.9	15.4
Black	18.2	16.7	19.8
Hispanic	18.4	20.6	16.3
White	41.0	40.7	41.4

The likelihood that a younger teen worked last summer was strongly influenced by his or her family income. In Chart 3, the employment rates of 16 and 17 year old teens in the 29 JAG states by their level of family income are displayed. The family incomes of these teens were broken down into six categories, ranging from less than $20,000 to highs of $100,000 or more. Young teens residing in families with annual incomes above $75,000 had the highest employment rates, ranging from 43 to 44 percent. Teens in these two family income categories had employment rates that were 23 to 24 percentage points higher than those of teens in the

lowest family income category (less than $20,000). Younger teens from families with low to middle incomes clearly would benefit from the job brokering and job placement services of JAG job specialists to help boost employment opportunities for them. This includes youth in the Multi-Year programs as well as those students who will enroll in the Senior Year program in the coming fall.

Chart 3:
Summer Employment Rates of Young Teens (16-17) by Household Income, JAG States Only, 2006



In the previous section on younger teenagers, we provided estimates of teen employment rates for race-ethnic and household income groups separately. The following analysis examines variations in teen employment rates across combinations of race-ethnic and household income subgroups for all 16 to 19 year olds residing in the 29 JAG states. The 2006 summer employment rates of teens typically rose with household income up to a certain point and then leveled off as we approached the highest income group (Table 3- Column D). In each race-ethnic group, teens in the lowest income group (those with household incomes under $20,000) were the least likely to be employed during the past summer. For example, among Black teens, summer 2006 employment rates varied from a low of 19 percent among those with a household income under $20,000, to 30 percent among those with family incomes between $20-$40,000, to a peak of 36

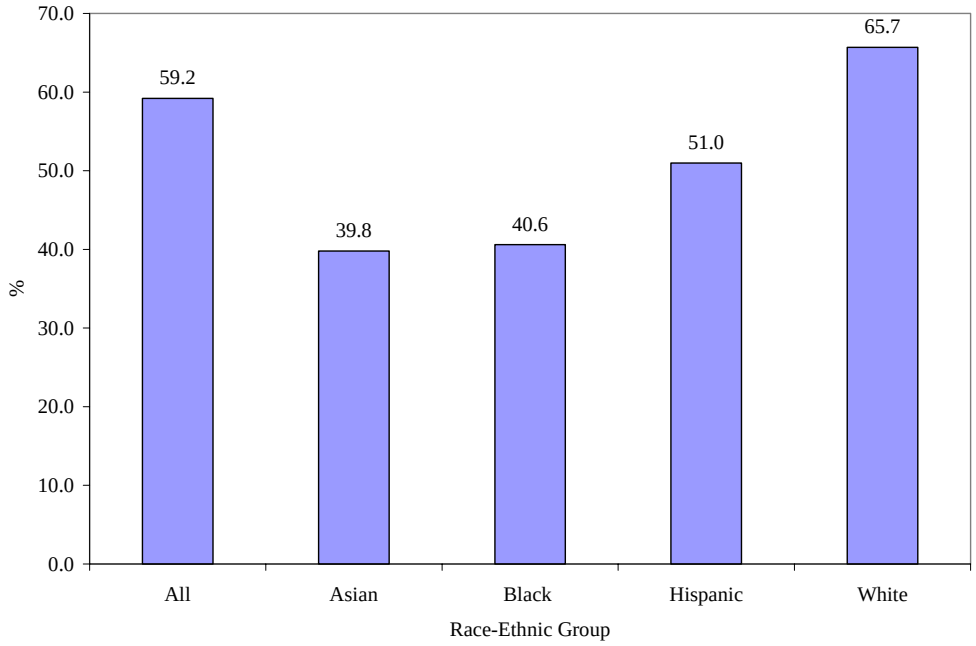
percent among those with family incomes between $40 and $60 thousand. The E/P ratios remained in the 32 to 35 percent range for Black teens in the higher income categories (Table 3). Similar patterns prevailed among Hispanics and Whites. In all cases, however, White teens in each income category were more likely to be working than their Black or Hispanic teen counterparts, with frequently large race-ethnic gaps in employment rates among teens in the lower income categories. The relative size of the gap in teen employment rates between those in the lowest (low income Black teens) and highest income cells (Whites with incomes above $75,000) was nearly three to one. These very large gaps in summer employment rates across teen income/race groups have prevailed over the past five summers.

Table 3:
Summer 2006 Employment Rates of All Teens (16-19) Residing in JAG States by Household Income and Selected Race-Ethnic Groups (in %, Not Seasonally Adjusted)

Family Income Category	(A) Black	(B) Hispanic	(C) White	(D) Total
Under $20,000	18.5	30.3	45.7	33.5
$20,000-$39,999	29.8	37.7	49.6	42.5
$40,000-$59,999	36.4	31.4	53.3	47.8
$60,000-$74,999	34.3	32.5	55.8	50.7
$75,000-$99,999	34.9	51.4	56.9	55.2
$100,000 and higher	32.8	29.1	56.9	53.3

We also analyzed the summer employment rates of teens with a high school diploma/ GED, but no post-secondary schooling. Across the 29 JAG states, high school graduates had an employment rate of 59%, exceeding the average employment rate for all teens during the summer of 2006 by 14 percentage points. As was the case among younger teens, employment rates of teenage high school graduates also varied considerably across race-ethnic groups. Nearly two out of every three White high school graduates 16-19 years of age were employed versus only two out of every five Black and Asian high school graduates. Hispanic teens had the second highest employment rate at 51% (Chart 4).

Chart 4:
Summer Employment Rates of 16-19 Year Old High School Graduates in the 29 JAG States by Race-Ethnicity, 2006 (in %, Not Seasonally Adjusted)



The Projected Summer 2007 Job Outlook for the Nation's Teens

How well are the nation's teens likely to fare in the job market this summer? To answer this important question, we will rely on forecasts from a simple regression model of teen summer employment rates that we developed four years ago.[5] This regression model initially was estimated with the use of national CPS data on teen employment rates for the years 1980 through 2002. The model was designed to predict the average summer teen employment rate for the months of June-August (seasonally adjusted) with the use of data on the estimated employment rates of teens in the winter and early spring of each year (January-April).

This simple forecasting model has performed extremely well in predicting teen summer employment rates over the 2003 to 2006 period. There typically is a large influx of teens into the civilian labor force during the summer months as students graduate from high school or go on summer vacation from high school and college. During recent years, approximately two million

[5] For a review of the construction of the summer teen employment forecasting model, the elements of the regression model, and its initial use in predicting the teen employment rate for the summer of 2003,
See: Andrew Sum, Nathan Pond, and Mykhaylo Trubs'kyy with Sheila Palma, The Summer Job Market for the Nation's Teenagers from 2000 – 2002 and the Employment Outlook for the Summer of 2003….,

additional teens have entered the labor market in June and July in search of work. For example, there were 6.755 million teens active in the civilian labor force on average during the January-March 2006 period, but the teen labor force swelled to approximately 8.768 million during the months of June and July of 2006, a gain of 2.013 million teens. The ability of these teens to obtain jobs during the summer should be strongly associated with the strength of the teen labor market earlier in the year. Many teens employed during the winter and spring months continue on those same jobs during the summer, and the hiring of additional teens in the summer is linked to the volume of hiring activity earlier in the year. The demise of the nation's Summer Youth Employment Program in 2000 also has contributed to the difficulties faced by teens, especially economically disadvantaged youth, in obtaining jobs during the summer months.[6]

In our prediction model, the summer teen employment rate (seasonally adjusted, June-August average) is regressed against the teen employment rate during the first four months of the year (January-April, seasonally adjusted). Findings of our regression results from the initial model are displayed in Table 4. The predicted seasonally adjusted, summer teen employment rate for a given year (in percentage points) will be equal to 43.8 + (.93) times the average monthly seasonally adjusted teen employment rate for the first four months of the calendar year.[7] The higher the teen employment rate during the January-April period, the higher will be the predicted summer employment rate. The overall fit for the simple regression model was quite respectable (an R^2 value of approximately .74, which was highly significant at the .001 level).

[6] In passing the Workforce Investment Act of 1998, the U.S. Congress and the Clinton Administration ended funding for a separate, categorical Summer Youth Employment Program that previously provided 600,000 or more jobs primarily for economically disadvantaged youth.

[7] The variable is referred to as the "adjusted winter/spring employment rate" since its value is not the actual teen employment rate from January-April but rather the value obtained by subtracting 43.8 from the estimated teen employment rate for the first four months of the year.

Table 4:
Findings of the Regression Model Estimates of the Summer Teen Employment Rate in the U.S.
Based on Observations from 1980 to 2002
(Seasonally Adjusted E/P Rates in %)

	(A)	(B)	(C)	(D)
Regression Variable	Coefficient	Standard Error	t-statistic	Sig. of t
Constant	43.8	.24	177.8	.001
WINSPREP	.93	.12	7.67	.001

R^2 = .737
D.F. = 1, 21
F = 58.8
Sig. of F = .001

Another method for assessing the forecasting accuracy of the regression model is to compare predicted summer employment rates for years outside of the time period covered by the regression analysis with the actual summer employment rates for those years. Comparisons of the predicted and actual summer teen employment rates for 2000 and each of the past four summers (2003-2006) are displayed in Table 5. For the summer of 2000, a year falling within the time period covered by the model, the predicted summer employment rate was 45.3%, which was nearly identical to the actual 45.0% employment rate for that summer. For the summer of 2003, the first prediction lying outside of the data set used to construct the model, we estimated a summer employment rate of only 37.8%, but our prediction turned out to be a little too optimistic. The CPS survey's estimated teen employment rate for the summer of 2003 was only 36.5%, or 1.3 percentage points below our prediction. In other words, teens fared somewhat less well than our model had predicted. For the summer of 2004, we predicted an employment rate of 36.9%. The actual, estimated employment rate for the summer was 36.1%, a value .8 percentage points below that of our prediction. Again, our model was slightly too optimistic. For the summer of 2005, our predicted teen summer employment rate came within one-tenth of a percentage point in exactly matching the CPS survey's estimated teen employment rate. Last year, our predicted teen summer employment rate exceeded the estimated employment rate by .3 percentage points. Thus, the model has done a very good job in predicting teen summer employment rates over the past three years.

Table 5:
Comparisons of Predicted and Actual Summer Employment Rates of the Nation's Teens, Summers of 2000, 2003-2007 (Seasonally Adjusted, in %)

	(A)	(B)	(C)
Year	Predicted	Actual	Actual – Predicted
2000	45.3	45.0	-.3
2003	37.8	36.5	-1.3
2004	36.9	36.1	-.8
2005	36.7	36.8	+.1
2006	37.4	37.1	-.3
2007	36.5	?	?

Unfortunately, the 2007 summer jobs outlook for the nation's teens appears to be slightly more gloomy than last year despite an improving national job market for older adults. Our predicted summer teen employment rate for this year is only 36.5%, a rate that would match the historical lows experienced during the summers of 2003-2004. During the first three months of this year, the seasonally adjusted, teen employment rate averaged only 36.0%, a rate that was .9 percentage points below the rate prevailing for the same three month period in 2006 (Table 6).[8] Despite strong job growth in the nation since the early fall of 2003, teens have until recently been unable to capture any substantive share of these new employment opportunities. The following section will point out the importance of gaining summer work experience by establishing the link between summer employment and post-high school employment for graduates from JAG school-to-work programs.

[8] Although the regression model is based on findings on teen employment rates for a four month period January-April, our prediction for 2007 relied on data available for the first three months of 2007. The April 2007 CPS monthly data were not available at the time of publication. They will be released by the U.S. Bureau of Labor Statistics in its monthly Employment Situation report on May 4th.

Table 6:
The Employment/Population Ratios of U.S. Teens 16-19 from
January-March 2006 to January-March 2007 (Seasonally Adjusted, in %)

Month	(A) 2006	(B) 2007	(C) Percentage Point Change 2007 – 2006
January	36.7	36.4	-.3
February	37.1	35.9	-1.2
March	37.0	35.6	-1.4
January-March Average	36.9	36.0	-.9

Source: U.S. Bureau of Labor Statistics, web site, tabulations by authors.

The Influence of In-School and Early Post-High School Summer Work Experiences of JAG Graduates on their Employment Status in the First Year After Graduation: Findings for the Class of 2003

Youth work experience during the high school years and the early post-high school period has impacts that go well beyond the immediate employment and earnings that work provides to youth. The employment status of teens over time is characterized by a high degree of path dependency.[9] The likelihood that a teen will be working in time period t is strongly linked to his / her employment status in earlier time periods t-1, t-2, and their employment status in the following time period (t + 1) will be significantly influenced by their employment status in time t. As we have illustrated elsewhere, "Early work experience begets more work experience."[10]

To identify the path dependency between summer employment for Class of 2003 JAG graduates and their employment status in the fall of 2003 and the spring of 2004, we analyzed the participant followup data for October 2003 and for May of 2004. The employment rates of Class of 2003 graduates in October of 2003 were calculated separately for those who worked in the summer and those who did not work in June / July 2003. Findings are presented for all graduates and for gender and race-ethnic subgroups in Charts 5 and 6. The October 2003 employment rate for those graduates who worked at some point in the summer was 60% versus only 23% for those with no summer work experience (Chart 5), a relative difference of 2.6 times. The

[9] For a more detailed review of the path dependency of teen employment.
See: Andrew Sum, Joseph McLaughlin, Ishwar Khatiwada, Tim Barnicle, Educational and Labor Market Outcomes for the Nation's Teens and Young Adults Since the Publication of America's Choice, Report Prepared for the National Center on Education and the Economy, Washington, D.C., 2006
[10] See: Andrew Sum, Neeta Fogg, and Garth Mangum, Confronting the Youth Demographic Challenge…

differences in October 2003 employment rates between those with and without summer work experience were quite substantial for both men and women and for graduates from each of the four major race-ethnic groups. Among Black and Hispanic graduates, those who worked in the summer of 2003 were three times more likely to be employed in October of 2003 than their counterparts who did not work during the summer.

Chart 5:
October 2003 Employment Rates of JAG Class of 2003
Graduates by Their Summer 2003 Employment Status, All and by Gender
(in %)

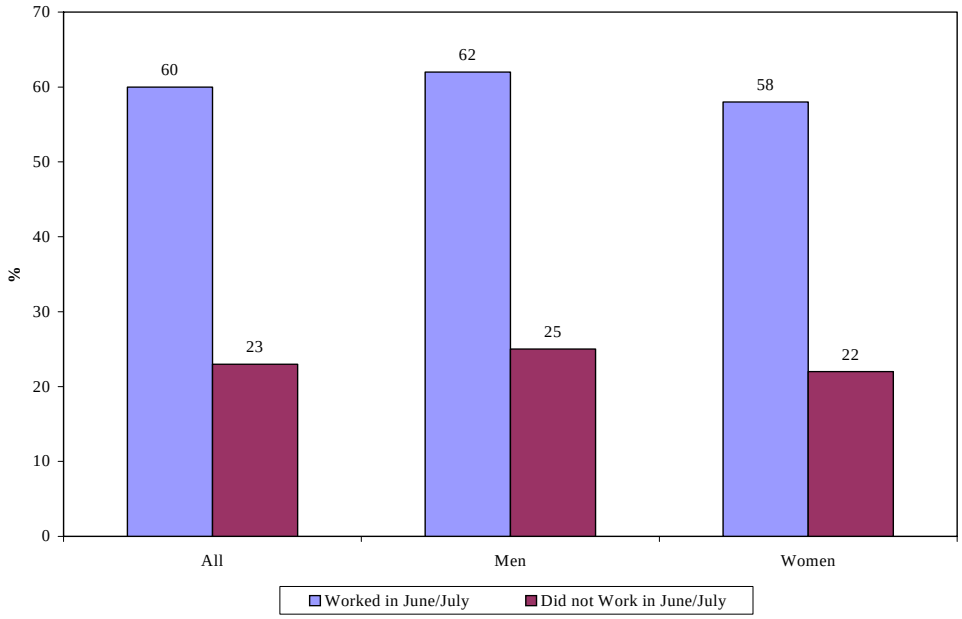
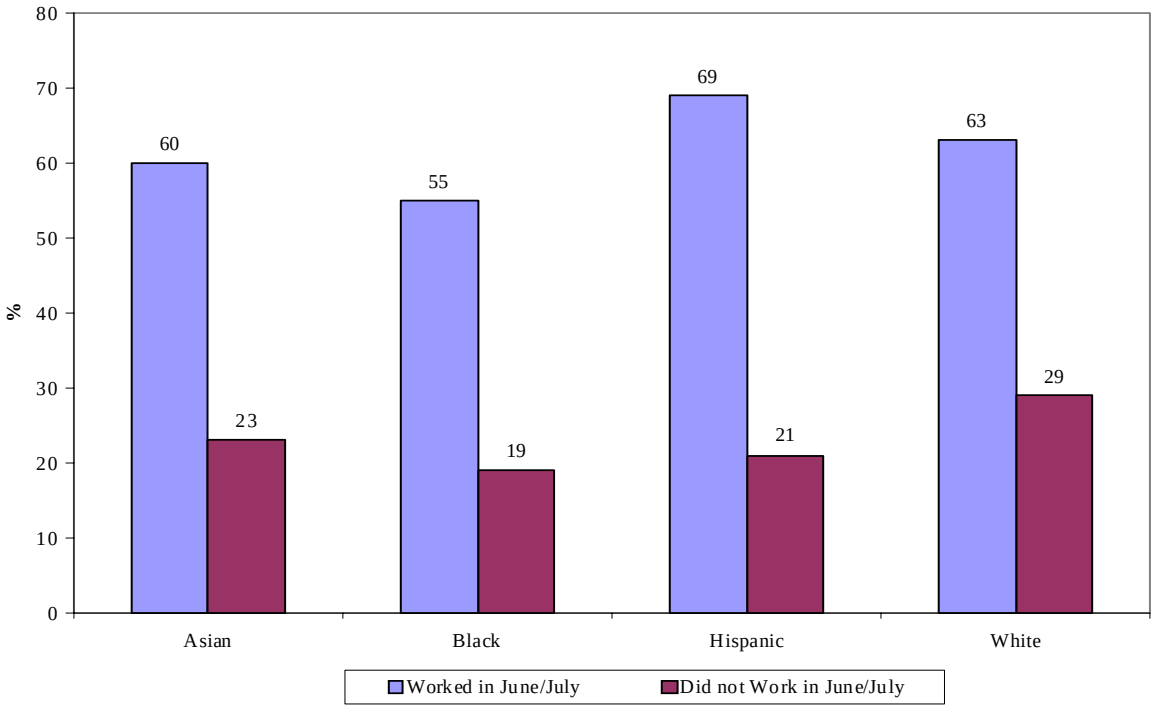


Chart 6:
October 2003 Employment Rates of JAG Class of 2003 Graduates by Their Summer 2003 Employment Status by Race-Ethnic Group (in %)



The May 2004 employment rates of graduates from the Class of 2003 by their summer 2003 employment status are displayed in Charts 7 and 8. Sixty-four per cent of the graduates with some employment during the June / July 2003 period were working in May 2004 versus only 36 per cent of those with no summer work experience. Again, the differences in employment rates between these two groups were quite substantial for both men and women and for members of each of the four race-ethnic groups. Black and Hispanic graduates with some work experience during the summer of 2003 were twice as likely to be working in May 2004 as their counterparts with no summer work experience. Among Asian and White graduates, the percentage point difference in employment rates was 23 to 27 percentage points between those with and without summer 2003 work experience. The findings in Charts 5 through 8 provide very strong evidence of the importance of immediate post-high school work experience in promoting the employability of graduates in the fall and late spring of the first year following graduation from high school. The simple statistical associations between these employment status variables for high school graduates were very strong for each gender and race-ethnic subgroup of JAG graduates from the Class of 2003.

Chart 7:
May 2004 Employment Rates of JAG Class of 2003 Graduates by Their Summer 2003 Employment Status, All and by Gender (in %)

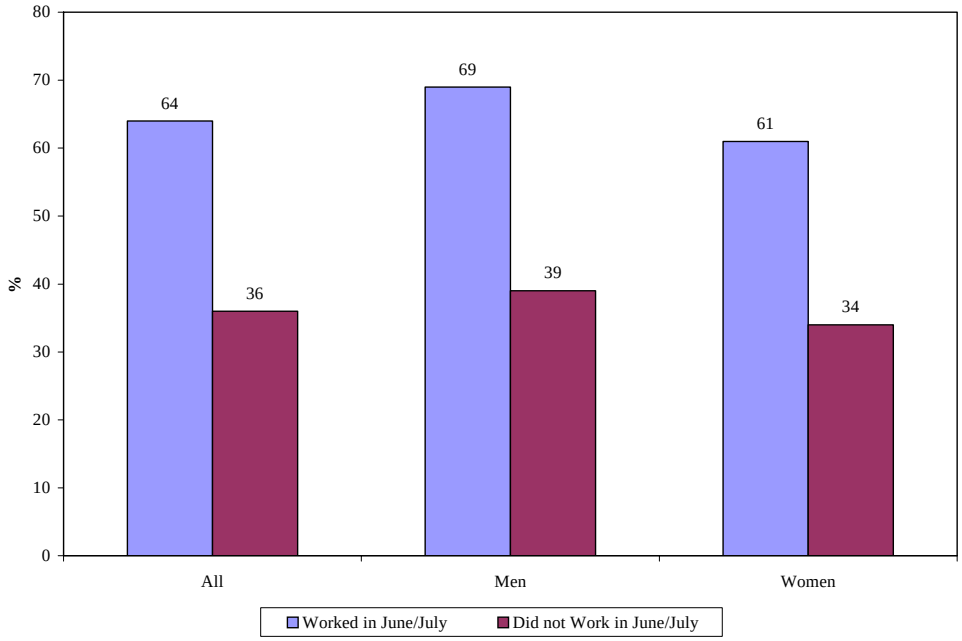
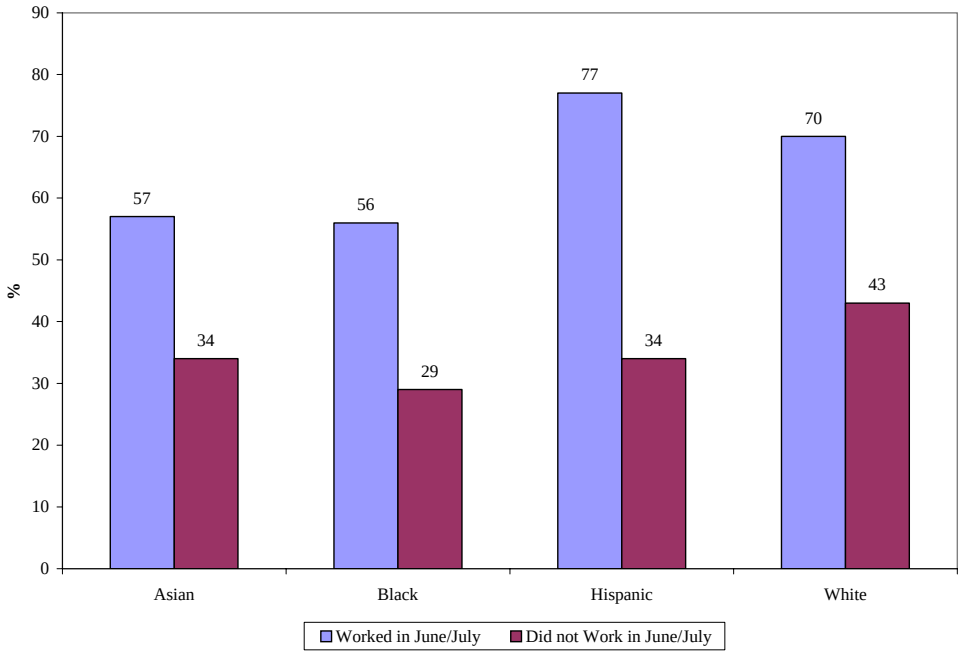


Chart 8:
May 2004 Employment Rates of JAG Class of 2003 Graduates by Their Summer 2003 Employment Status by Race-Ethnic Group (in %)



To estimate the independent impacts of in-school and post-high school summer work experience on the employment of high school graduates in the fall and spring following graduation, we constructed a set of multiple regression models of the probability of employment of 2003 graduates in October 2003 and May 2004. In both of these models, the dependent variable is the employment status of the JAG graduate at the time of each followup survey. Those employed at the time of the survey are coded as a one while those not employed are coded as zero. The predictor variables include the gender, race-ethnic origin, and family living arrangements of the graduates at the time of the intake survey as well as his / her employment status in high school and during the summer of 2003. Each of the predictor variables is coded as a 1,0 variable. Findings of the regression models are displayed in Tables 7 and 8.

Table 7:
Findings of the Multiple Regression Analysis of the Probability of a JAG Class of 2003 Graduate Being Employed in October 2003

Predictor Variable	(A) Coefficient	(B) t-Statistic	(C) Sig. Level
Constant	.287	14.80	.001
Male	.037	2.46	.01
Asian or Another Race	-.088	-1.81	.07
Black, not Hispanic	-.105	-6.52	.001
Hispanic	.037	.89	--
Lived in married couple family	-.010	-.63	--
Worked in high school	.065	4.03	.001
Worked in summer	.373	22.15	.01

R^2 = .170 Sig. of F = .001
F = 110.40

Table 8:
Findings of the Multiple Regression Analysis of the Probability of a JAG Class of 2003 Graduate Being Employed in May 2004

Predictor Variable	(A) Coefficient	(B) t-Statistic	(C) Sig. Level
Constant	.426	22.22	.001
Male	.054	3.64	.01
Asian or Another Race	-.111	2.28	.02
Black, not Hispanic	-.152	9.45	.001
Hispanic	.020	.50	--
Lived in married couple family	.008	.50	--
Worked in high school	.101	6.31	.001
Worked in summer	.261	15.50	.001

R^2 = .137 Sig. of F = .001
F = 85.39

In each of the two models, the employment status of the respondent during high school and the summer months immediately following high school had positive, statistically significant impacts on the likelihood of their being employed in both October 2003 and May 2004. The estimated impact of the summer employment variable on the probability of employment in October and May was considerably greater than the impact of the in-school employment variable. For example, in the October 2003 model, working in the summer immediately following graduation increased the probability of working in October by 37.3 percentage points while working in high school raised the probability by only another 6.5 percentage points, a relative difference of nearly 6 times.

In the multivariate statistical model predicting the employment status of Class of 2003 graduates in May 2004, being employed in the summer raised the probability of expected employment in May by 26 percentage points while high school employment increased the probability by another 10 percentage points, a relative difference of 2.6 times.

To place the findings on the importance of in-school and summer 2003 work experience in promoting post-high school employability in perspective, we generated estimates of the probability of high school graduates with given demographic and family background traits being employed in October 2003 and May 2004 based on their in-school and summer employment status. In our first example, the high school graduate is a White, woman who lived in a single

parent family during her senior year. If she did not work in high school or in the summer of 2003, her estimated probability of being employed in October 2003 was just under 29%. If she had worked in high school but not in the summer of 2003, her predicted employment rate was 35%. If she had worked both in high school and during the summer of 2003, her predicted probability of working in October 2003 was between 72% and 73%. This last individual was two and one-half times more likely to be working in October 2003 than her peers with no work experience in high school or the summer, a dramatic difference in employment rates.

In our second case, the base individual is a Black, male graduate from the Class of 2003 who lived in a married couple family during his senior year of high school (Table 9, lower half). If he did not work either in high school or in the summer 2003, his predicted probability of employment was 33.6%. His expected probability of working would rise to 43.7% if he worked in high school but not the summer of 2003 and would increase further to just under 70% if he worked in both high school and the summer of 2003. The post high school employment rates of young Black, male graduates from the Class of 2003 were powerfully influenced by their employment experiences in high school and the summer immediately following graduation.

Table 9:
Predicted Employment Rates of Selected Subgroups of JAG High School Graduates in October 2003 and May 2004

Subgroup of High School Graduates	Predicted Employment Rates, October 2003
White female, in single parent family, did not work in high school or summer 2003	28.7%
White female in single parent family, worked in high school, but not in summer 2003	35.2%
White female in single parent family, worked both in high school and in summer 2003	72.5%
Subgroup of High School Graduates	**Predicted Employment Rates, May 2004**
Black male, married couple family, did not work in high school or summer 2003	33.6%
Black male, married couple family, worked in high school but not in summer 2003	43.7%
Black male, married couple family, worked in both high school and summer 2003	69.8%

What Can Be Done to Improve the 2007 Summer Job Prospects Of JAG Program Participants?

Given the continued weakness in the teen labor market and the absence of any jobs stimulus program to boost teen summer employment prospects, the 2007 summer job outlook for the nation's teens remains rather bleak, especially for the youngest teens (16-17), those teens living in low income families and neighborhoods, minority youth living in large central cities, and teens residing in economically depressed rural areas. There is, however, considerable geographic variation in teen employment rates across states, cities, and neighborhoods. Some JAG programs will find it much easier to place JAG participants in jobs while others will find it considerably more difficult.

JAG job specialists in the Senior Year program will have to work considerably harder to place more of the graduating seniors in jobs during the forthcoming summer. Job placements will be especially difficult for programs serving high school graduates in local labor markets with limited job growth, high unemployment rates, those areas with a large new immigrant workforce, and those serving a high share of graduates living in low income families and neighborhoods. Teens living in such geographic areas and families in the past few summers have found it very difficult to find any type of job. Career specialists in JAG multiyear programs also will have to work much harder to find jobs for those high school students on summer vacation. Such early work experience during the summer and the regular school year can significantly improve their later employment prospects and should be vigorously promoted by all career specialists.

Local JAG program directors should encourage job specialists to devote a higher share of their time to job development and placement activities during the spring and summer months. Many of the graduates from the Senior Year program will need the job brokering services of the job specialists to find some type of employment in the current labor market environment for teenagers. State and local JAG leadership should also seek the active assistance of state and local board members to help open up job opportunities for recent graduates. All available private and public resources should be marshaled to expand immediate job opportunities for JAG graduates from the Class of 2007 and those high school students participating in the Multi-Year Program.

Far fewer youth across the nation are gaining exposure to the job market and to the real world of work than in the late 1980s and 1990s. Youth not enrolling full-time in four year colleges upon graduation from high school tend to obtain important economic benefits from in-school work experience, both year-round and summer, and from employment in their late teens when they leave high school. Such work experience can be an important form of human capital investment, helping build non-cognitive skills, soft skills, as well as occupational skills on the job that will improve their future employability and real wage prospects.[11] The nation's employers have voiced strong concerns about the employability skills and literacy abilities of

[11] For evidence on the economic benefits of early work experience,
See: Andrew Sum, Neeta Fogg, and Garth Mangum, Confronting the Youth Demographic Challenge: The Labor Market Prospects of Out-of-School Youth, Sar Levitan Center for Social Policy Studies, Johns Hopkins University, Baltimore, 2000. An analysis of the effects of non-cognitive skills on the labor market experiences of young adults is presented in the following chapter: James J. Heckman and Pedro Carneiro, "Human Capital Policy," in *Inequality in America*, (Editor: Benjamin M. Friedman), MIT Press, Cambridge, 2003.

new high school graduates. As the evidence for the Class of 2003 has clearly shown, graduates who worked during high school and the summer months were considerably more likely to be working at the time of the fall 2003 and spring 2004 follow-up surveys of graduates from the class of 2003.