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An assessment of the labor market, income, health, social, and fiscal consequences of dropping out of high school: findings for Illinois adults in the 21st century

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**An Assessment of the Labor Market, Income,
Health, Social, and Fiscal Consequences of
Dropping Out of High School: Findings for
Illinois Adults in the 21st Century**

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“This boy is ignorance. This girl is want. Beware them both, and all of their degree, but most of all beware this boy, for on his brow I see that written is doom, unless the writing be erased”.

Charles Dickens,
A Christmas Carol

Introduction

During the past few years, a growing number of educational researchers, labor market analysts, national foundations, national and state business organizations, city mayors, and state legislators have focused on the problems of high school dropouts.¹ Dropout problems among America’s high school students remain excessively high, especially among large urban school districts, Black and Hispanic youth, and low income youth, and the personal and social costs associated with dropping out of high school appear to be quite large. Male dropouts in particular have faced a number of severe labor market difficulties in recent decades, with steep declines in their real wages and annual earnings.² Their deteriorating labor market fortunes have reduced their ability to form independent households, to marry, to support their children, and to contribute positively to the fiscal position of state and national governments.

Both the Bush Administration and the U.S. Congress voiced concerns over the low rate of on-time graduation rates in their passage of the No Child Left Behind legislation in 2001. In Illinois, a joint resolution of the state legislature led to the creation of a state Task Force on Re-enrolling Students Who Dropped Out of School. In the current year, the Governor and members of the legislature jointly appointed members of the task force. The work of the task force and

¹For a review of recent national, state, and local research on high school graduation and dropout rates, See: (i) Gary Orfield (Editor), Dropouts in America: Confronting the Graduation Crisis, Harvard Education Press, Cambridge, 2004; (ii) Elaine Allensworth, Graduation and Dropout Trends in Chicago: A Look at Cohorts of Students from 1991 Through 2004. Chicago: Consortium on Chicago School Research at the University of Chicago. <http://www.consortium-chicago.org/publications/p75.html>; (iii) Jay P. Greene, High School Graduation Rates in the United States, New York, Manhattan Institute and Black Alliance for Education Options. <http://www.manhattan-institute.org>; (iv) Christopher Swanson, Who Graduates? Who Doesn’t? A Statistical Portrait of Public High School Graduation, Class of 2001. Washington D.C.: The Urban Institute. www.urban.org; (v) Nancy Martin and Samuel Halperin, Whatever It Takes: How Twelve Communities Are Reconnecting Out-of-School Youth, American Youth Policy Forum, Washington, D.C., 2006; (vi) Daria Hall, Getting Honest About Grad Rates: How States Play the Numbers and Students Lose, The Education Trust, June 2005; (vii) Andrew Sum, Paul Harrington, et. al., The Hidden Crisis in the High School Dropout Problems of Young Adults in the U.S.: Recent Trends in Overall School Dropout Rates and Gender Differences in Dropout Behavior, Center for Labor Market Studies, Northeastern University, Boston, Report Prepared for The Business Roundtable, Washington, D.C., 2002; (viii) Ishwar Khatiwada and Andrew Sum, The Recent Labor Market Experiences and Problems of the Nation’s Young High School Dropouts: Their Implications for the JAG Dropout Recovery Program, Prepared for Jobs for America’s Graduates, Alexandria, Virginia, June 2005.

² See: Andrew Sum, Tim Barnicle, and Ishwar Khatiwada, The Labor Market Experiences of the Nation’s Youth Since the Publication of America’s Choice, Report Prepared for the National Center on Education and the Economy, National Skills Commission, Washington, D.C., 2005.

other state/local efforts to address the dropout problem in Illinois would be aided by the availability of timely and comprehensive data on the labor market, income, health, social, and fiscal consequences of dropping out of school in Illinois.³ This research report prepared for the Alternative Schools Network under the leadership of Jack Wuest is designed to provide state and local policymakers, educators, and the public at large with information on the labor market, income, health, criminal justice, and fiscal outcomes of dropping out of high school in Illinois.

Knowledge of the magnitudes and sources of the personal and societal costs of dropping out of high school is important for a variety of reasons. First, the information on the personal economic benefits of staying in high school through graduation and completing some post-secondary schooling should be widely disseminated to junior high schools and high schools that experience above average dropout rates. The key findings on the labor market and lifetime earnings consequences of dropping out of high school can be packaged in highly readable formats for use in educating and counseling youth on educational and career options.⁴ Second, educators and educational policy makers should be aware of the size of the potential private and social benefits from improving high school graduation rates in making decisions about the future funding of dropout prevention efforts. The economic benefits from successfully reducing dropout rates can be quite substantial. Third, the general public needs to be better informed about the various economic and social benefits, including taxpayer benefits, that can be generated by an increase in the number of high school students that will graduate with a regular diploma. More informed decision-making with respect to support for programs to bolster high school graduation rates should result from a better understanding of the benefits and costs of dropout prevention programs.

Our report's findings are based on a wide array of data sources on Illinois adults for varying time periods. We will, thus, begin our discussions with an overview of the sources of the data underlying all of the estimates appearing in this paper. This discussion will be followed by

³ In a separate paper, we have generated estimates of the numbers and demographic characteristics of 16-24 year old adults in Illinois who have left high school before obtaining a regular high school diploma. See: Andrew Sum, Ishwar Khatiwada, Joseph McLaughlin, et. al. High School Dropouts in Illinois: Estimating the Numbers and Demographic Characteristics of Young Adult Dropouts in the State in 2005, Prepared for Alternative Schools Network, Chicago, Illinois, 2006.

⁴ For an example of the use of such data in counseling at-risk youth, See: Edward DeJesus, Makin' It: The Hip-Hop Guide to True Survival, Youth Development and Research Fund, 2002.

an examination of the employment experiences of young high school dropouts and graduates (16-19 years old) in Illinois in recent years, with some substate breakouts of the data for Cook County and the city of Chicago. The employment outcomes for teens will be supplemented with a more comprehensive examination of the employment rates of Illinois adults (25 and older) by educational attainment during 2005 together with comparisons with the U.S.

The employment analysis will be complemented by an examination of the annual earnings of Illinois adults (18-64) by educational attainment in 2005 with separate breakouts of the data for men and women, and comparisons of the findings for Illinois with those for the entire U.S. will be provided. The annual earnings data will be supplemented with estimates of the lifetime earnings of Illinois adults by their level of schooling in 2005. Findings will be presented for all adults in the 18-64 age group and for men and women separately. Trends in the lifetime earnings of Illinois men and women over the entire 1980-2005 period will be described and assessed. The very steep declines in the lifetime earnings of male high school dropouts will be emphasized.

The findings on the annual and lifetime earnings of Illinois adults will be followed by a review of the income inadequacy problems of Illinois adults who failed to graduate from high school. These inadequacy problems include the much higher incidence of poverty, near poverty, and low income problems among less educated adults over their work lives. These estimates of the incidence of income inadequacy problems will be provided for men and women separately.

Findings on the labor market and income consequences of dropping out of high school will be followed by an overview of the comparative health status of high school graduates, their disability status, the labor market and income difficulties of dropouts when they are disabled, and their dependence on cash public assistance income to support themselves when they become disabled. The incarceration status of Illinois high school dropouts, especially males, will be reviewed and compared to that of their better educated peers, and the higher costs of institutionalization among dropouts will be estimated and examined.

Given the higher rates of joblessness and lower annual earnings of the state's high school dropouts, one would anticipate that they would be more dependent on cash public assistance income and in-kind transfers (food stamps, rental subsidies, Medicaid) to support themselves and their families. To identify the degree to which high school dropouts and their better educated

peers received various types of cash and in-kind transfers, we examined the findings of the 2005 ACS survey for Illinois and the U.S. Administrative data on the educational characteristics of TANF benefit recipients in Illinois were combined with data on the educational backgrounds of 18-45 year old women in the state to estimate the comparative incidence of TANF benefit receipt among high school dropouts, high school graduates, and those adults with some post-secondary schooling.

The final section of the paper presents a series of findings on the fiscal impacts of 18-64 year olds in Illinois in terms of their payments of payroll and income taxes and their receipt of a comprehensive array of cash and in-kind benefits. The U.S. Census Bureau has provided estimates of tax payments and the value of in-kind benefits received by individuals and households based on findings from the March 2005 CPS survey. For each individual 18-64 years old, we have generated estimates of their net fiscal benefits to the state and federal government by adding all payments of Social Security payroll taxes, federal retirement contributions, and state and federal income taxes and subtracting the value of cash income transfers and key in-kind benefits (food stamps, rental subsidies, Medicaid and Medicare benefits, energy assistance). The mean values of these net fiscal benefits were calculated for 18-64 year old Illinois adults in each of five educational attainment categories. Results will reveal that high school dropouts are the only group with negative net fiscal benefits; i.e., they receive more in cash and in-kind benefits than they pay in combined payroll and federal and state income taxes.

Data Sources for the Analyses Appearing in the Report

The analyses of the economic, labor market, income, health, social and fiscal consequences of dropping out of high school appearing in this report are based on a wide array of data sources. First, many of the employment and earnings measures for Illinois youth and adults as well as a number of the health / disability measures are based on the findings of the American Community Surveys for 2005. The American Community Survey (ACS) is a national household survey conducted by the U.S. Census Bureau since 2001. During 2005, more than 84,000 households in Illinois completed an ACS questionnaire that collected detailed information on the demographic and socioeconomic characteristics of all household members,

including their educational attainment and school enrollment status,⁵ their employment status at the time of the survey, their labor market experiences in the twelve month period prior to the survey, and their earnings and other sources of money income in the previous twelve months. The ACS survey data on the annual money incomes of families and the number / age distribution of family members can be used to identify the number of families and persons that are poor / near poor or low income.⁶

A second key source of data for the analysis was the March 2005 and March 2006 CPS surveys, including the work experience and income supplements. The March CPS surveys for these two years involved interviews with approximately 2,500 households in Illinois and 57,000 households across the country.⁷ The monthly CPS survey is conducted by the U.S. Census Bureau for the U.S. Bureau of Labor Statistics. The March survey contains a supplementary set of questions that collect information on the self-reported health status of respondents, their sources of income during the previous calendar year, and their receipt of various forms of cash and in-kind assistance from local, state, and national government agencies. With the available income and employment information, the U.S. Census Bureau imputes estimates of the amount of Social Security payroll taxes, federal retirement contributions, and state and federal income taxes paid by individuals during a given calendar year. These imputed tax and cash / in-kind transfer data for calendar year 2004 are used to estimate the fiscal contributions of adults 18-64 years old in Illinois by their educational attainment level.

A third source of data is the public use micro records data (PUMS data) from the 2000 Census. The 2000 Census collected data on the demographic and educational backgrounds of inmates of institutions, including jails, juvenile homes, nursing homes, and state / federal prisons. The data on the age, gender, race-ethnic, and educational characteristics of inmates of institutions

⁵ Respondents were asked to identify whether they were enrolled in school at any time in the two month period prior to the survey. Persons who were not enrolled in school and who lacked a high school diploma / GED are classified as high school dropouts in this report.

⁶ The definition of a “low income family” in this report is that used by many poverty and welfare reform researchers across the country. It is a family with an annual income below two times the poverty line for a family of its given size and age composition. For a review of the poverty, low income, and selected other income thresholds used by poverty researchers to define income inadequacy, See: Garth Mangum, Stephen Mangum, and Andrew Sum, The Persistence of Poverty in the United States, Johns Hopkins University Press, Baltimore, 2004.

⁷ For a review of the labor force concepts and measures underlying the monthly CPS household surveys, See: U.S. Bureau of Labor Statistics, Employment and Earnings, January 2006, “Appendix A,” U.S. Government Printing Office, Washington, D.C., 2006.

were used to estimate the incidence of institutionalization rates for a variety of educational attainment subgroups of adults in Illinois.

Fourth, the PUMS data from the 1980, 1990, and 2000 Censuses together with the ACS data for 2005 were used to estimate changes over time in the lifetime earnings of 18-64 year old adults by educational attainment in Illinois. Findings will be presented for all Illinois adults and for men and women separately. Selected comparisons of the Illinois findings with those for the entire U.S. will be provided. A major emphasis will be placed on the steep deterioration in the lifetime earnings of Illinois adults without a high school diploma, especially men. Males with a high school diploma / GED but no post-secondary schooling also have experienced sharp declines in their expected lifetime earnings over the past few decades in both Illinois and the U.S.

Fifth, several administrative data sources, including the national / state data base on the educational characteristics of recipients of cash benefits under the Temporary Assistance for Needy Families (TANF) program, were used to help identify the per cent of female adults in Illinois in selected educational attainment subgroups who were recipients of TANF benefits.⁸ The administrative data on the characteristics of TANF recipients were supplemented with findings from the 2005 ACS survey on the share of Illinois adults (18-64 years old) receiving various types of cash public assistance income, including Supplemental Security Income for the Aged and Disabled, Social Security disability, and Social Security retirement and survivors benefits.

A sixth source of data that was used in conducting this study was the administrative data bases of the Illinois Department of Corrections. These data bases provided information on the numbers of individuals who were inmates of jails and prisons across the state in recent years and the annual costs of housing an inmate in jail or prison. These cost data were used to estimate the higher lifetime incarceration costs associated with adult dropouts in the state of Illinois in comparison to those of their better educated counterparts, especially among males who dominate the ranks of the jail / prison population in the state.

⁸ The data were provided by the U.S. Department of Health and Human Services' Administration for Children and Families, Washington, D.C.

The Labor Market for Out-of-School Teens and Young Dropouts in Illinois in 2005

The difficulties faced by out of school teens in securing employment, especially in major central cities and high poverty urban areas, have accelerated since the end of the national labor market boom in early 2001, and they should be viewed as a troublesome matter by local educational and workforce development policymakers.⁹ However, it is important to distinguish the fate of two educational subgroups of out-of-school teenagers: those out-of-school youth that possess a high school diploma and those who left high school without a diploma. The labor market environment faced by each of these two subgroups of out of school teenagers is typically quite different, with dropouts facing a more hostile environment and increased competition from young foreign immigrants, especially illegals who have displaced young native born men from jobs in large numbers in recent years.

We have analyzed recent data from the American Community Surveys (ACS) for 2005 to assess the labor market situation of out of school 16 to 19 year olds in the state of Illinois and key sub state areas including Cook County and the City of Chicago. Comparisons with labor market outcomes for their teenaged counterparts across the nation also will be provided. In this section of the paper, we both identify and analyze the employment/population ratios of all out of school teens, high school graduates, and high school dropouts in 2005.¹⁰ The E/P measure represents the ratio of the number of teens who were employed to the number of teens in the civilian non-institutional population living in private households.¹¹ The advantage of using the E/P ratio as a core measure of the labor market situation among teens is that in an unfavorable labor market, such as the one frequently faced by teenagers in the nation's central cities and high poverty urban areas, jobs for teens become more difficult to obtain. As a result of these depressed labor market conditions, some of them stop actively looking for work and are no longer counted among the ranks of the official unemployed even though they remain jobless.

⁹ For a review of the deteriorating labor market fortunes of teens and young adults with limited schooling, See: (i) Peter Edelman, Harry J. Holzer, and Paul Offner, Reconnecting Disadvantaged Young Men, Urban Institute Press, Washington, DC, 2006; (ii) Andrew Sum, Ishwar Khatiwada, and Abbe Will, The Decline in Work Experience Opportunities among Massachusetts and U.S. Teens (16-19) between 2000 and 2003-2004: Implications for Youth Workforce Development Policy, Report Prepared for the Commonwealth Corporation, April 2006.

¹⁰ A high school dropout is a youth who was not enrolled in school and who did not hold either a regular high school diploma or a GED certificate.

¹¹ The ACS survey did not interview teens living in group quarters, such as college dormitories, juvenile homes, teen mother facilities, jails, or prisons.

Their absence from the ranks of the employed, however, will be captured by a decline in their employment/population ratio.

Some youth development and labor market analysts argue that one of the reasons why 16-19 year olds drop out of school is to secure a source of income and work.¹² However, when looking at our estimates of employment to population ratios for out of school 16 to 19 year olds, there are considerable differences between the employment rates of out of school youth with a high school diploma and those without a high school diploma or a GED (Table 1 and Chart 1). Only a small minority of teenaged dropouts were successful in finding any type of work, especially in Cook County and the city of Chicago where only 1 of 4 dropouts were able to obtain some employment in 2005.

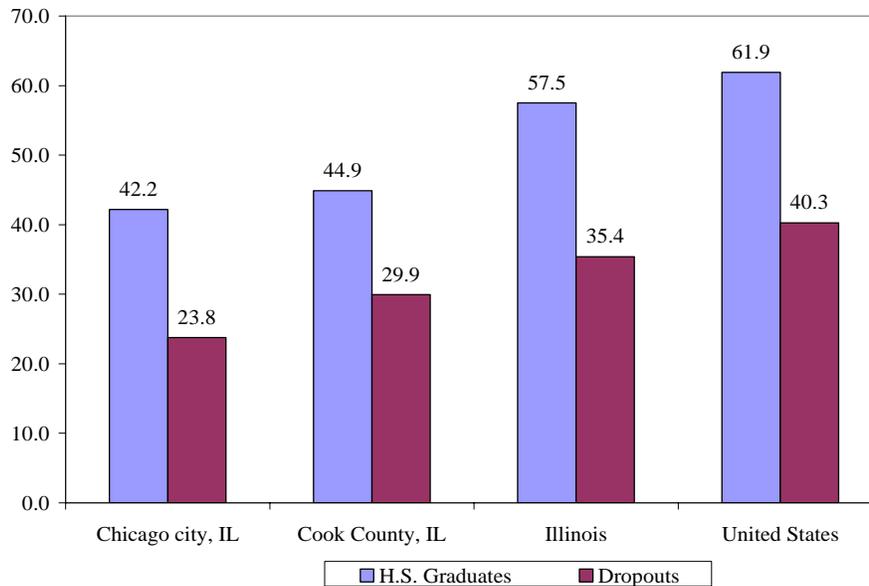
Table 1:
Employment to Population Ratios of Out of School 16 to 19 Year Olds by Educational
Attainment in the U.S., the State of Illinois, City of Chicago and Cook County, 2005
(in %)

Geographic Area	(A) Total Out of School	(B) H.S. Graduates	(C) Dropouts
U.S.	53.0	61.9	40.3
Illinois	47.9	57.5	35.4
Cook County, IL	38.0	44.9	29.9
Chicago city, IL	33.0	42.2	23.8

Source: 2005 American Community Surveys, public use files, tabulations by authors.

¹² For a recent review of reasons for dropping out and causes of school dropout problems, See: Rumberger, Russell W.; in Dropouts in America: Confronting the Crisis, edited by Gary Orfield, Harvard Education Press, Cambridge, 2004.

Chart1:
Employment to Population Ratios of Out of School 16 to 19 Year Olds by Educational
Attainment in the City of Chicago, Cook County, Illinois, and the U.S., 2005
(in %)



The employment rate of all out-of-school teens (16-19 year old) in the U.S. during 2005 was 53 percent. (Table 1) However, during 2005, the E/P ratios of these out of school teens varied quite widely depending on their educational attainment. Teenaged high school graduates in the U.S. were substantially more likely to be employed than their dropout counterparts, 62 percent versus 40 percent. A similar pattern is observed at the state and local level for teens in Illinois. Similar to other Midwestern states, teens and young adults in Illinois have been severely affected by the deterioration in labor market conditions since early 2001, particularly out of school teens and young adults with no post-secondary schooling.¹³ In the state of Illinois, slightly more than 57 percent of out-of-school teenagers with a high school diploma were employed during 2005, compared to only 35 percent of teenaged dropouts. At the local level, in the city of Chicago and Cook County, out of school teens fared far worse than their state and national counterparts. As mentioned earlier, out-of-school teenagers living in large central cities and high poverty neighborhoods typically are faced with less favorable labor market conditions. For example, in the city of Chicago in 2005, only 24 percent of teen dropouts were employed, an

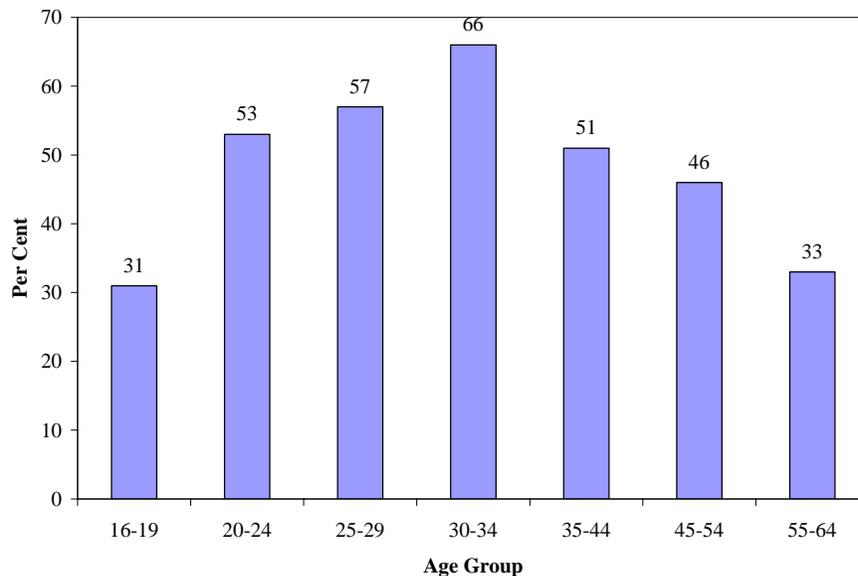
¹³ See: Andrew Sum, Joseph McLaughlin, and Ishwar Khatiwada, Left Far Behind in the Labor Market: The Collapse of the Teen Job Market in The Industrial Midwest, paper prepared for the Chicago Alternative Schools Network, Chicago-Illinois, February 2006.

employment rate only 60 per cent as high as the E/P ratio of their national counterparts during the same time period. This finding implies that 76 of every 100 16-19 year old dropouts in the city of Chicago were jobless. High school graduate teens living in the city of Chicago had a higher E/P ratio than dropouts, (42 % vs. 24%); however, their employment rate was considerably lower than that of their state and national counterparts.

The Employment Rates of 16-64 Year Olds in Illinois by Educational Attainment

Similar to the situation for their better educated peers, the employment rates of high school dropouts in Illinois tend to rise steadily with age as they leave their teen years, but they tend to peak quite early (in the 30-34 age range) and fall well below those of their better educated counterparts over their entire working lives (Chart 2 and Table 2). In Illinois, the E / P ratio of teen dropouts was only 31% in 2005 but it rose sharply to 53% among 20-24 year olds and to 66% among 30-34 year olds when it peaked. The E/P ratios of adult dropouts fell steadily and steeply after age 35 and declined to 33% for those in the 55-64 age group (Chart 2). The employment rates of high school graduates in Illinois do not peak until the mid-40s, and Bachelor degree holders' employment rates do not peak until their early to mid-50s.

Chart 2:
Employment Rates of 16-64 Year Old High School Dropouts in Illinois by Age Group, 2005



For the 16-64 year old age cohort as a whole, the employment rates of Illinois adults rise steadily and strongly with their educational attainment (Table 2). The employment rate of adults lacking a high school diploma or a GED was only 55% in 2005 versus 69% for high school graduates, 77% for those with 1-3 years of college, 82% for those with a Bachelor's degree, and 85% for those with a Master's or higher degree (Table 2 and Chart 3). Female dropouts fared considerably worse than their male counterparts in finding employment in the state in 2005 with only 42 of every 100 female adult dropouts being employed versus 66 of every 100 male dropouts. The low employment rates of female adult dropouts substantially increase their exposure to poverty and other income inadequacy problems over their entire work lives, placing their children at a variety of risks of developmental problems.

Table 2:
Employment Rates of 16-64 Year Old Adults in
Illinois by Educational Attainment and Gender, 2005
(in %)

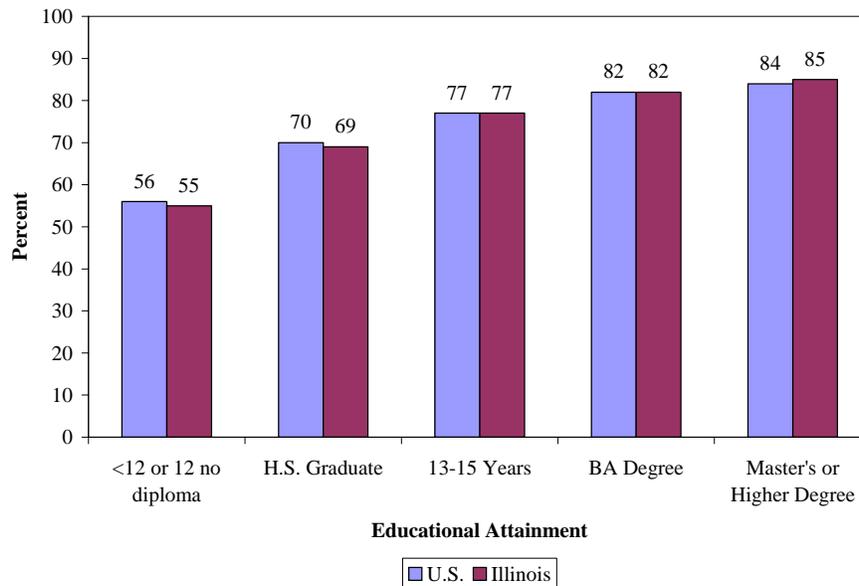
	(A)	(B)	(C)
Educational Attainment	All	Men	Women
<12 or 12, no diploma / GED	55.3	66.3	42.2
H.S. diploma / GED	68.9	76.1	61.3
13-15 years	77.1	83.2	71.7
BA degree	81.8	89.7	74.3
Master's or higher degree	85.4	90.7	79.9
Total	73.7	80.7	66.7

Source: 2005 American Community Surveys, public use files, tabulations by authors.

The patterns of adult employment rates by educational attainment in Illinois and the U.S. were basically identical during 2005 (Chart 3). In both areas, only 55 to 56 per cent of those adults lacking a high school diploma / GED were employed versus employment rates at or close to 70 per cent for high school graduates and 82 per cent for those holding a Bachelor's degree. As a consequence of their lower employment rates, less educated adults acquire less work experience than their better educated peers. They will work 20% fewer hours than high school graduates and one-third fewer hours than college graduates over their work lives. These years of cumulative work experience are a valuable form of human capital that increases the weekly

wages of workers, thereby providing them with a greater economic incentive to work more hours.¹⁴

Chart 3:
Employment Rates of 16-64 Year Olds in Illinois and
the U.S. by Educational Attainment, 2005
(in %)



The absolute sizes of the gaps between the employment rates of high school dropouts in Illinois and those of their better educated counterparts are quite large, and they widen as the educational attainment of the group being compared with dropouts increases (Table 3). In 2005, the employment rate of 16-64 year old dropouts in the state was nearly 14 percentage points below that of high school graduates and 22 percentage points below that of adults completing 1-3 years of college. The absolute size of the gaps between the employment rates of dropouts and high school graduates was nearly twice as high for women than for men (19 vs. 10 percentage points). The considerably lower employment rates of female dropouts in Illinois reduce their annual earnings and family incomes, thereby placing them at considerably greater risk of income inadequacy problems and being dependent on cash income and in-kind transfers from the state

¹⁴ Longitudinal research at the national level indicates that less educated women also receive lower economic returns from their years of work experience than their better educated peers.
See: Helen Connolly and Peter Gottschalk, Returns to Tenure and Experience Revisited – Do Less Educated Workers Gain Less from Work Experience?, Boston College, Economics Department, Chestnut Hill, 2000.

and federal governments to support themselves. Findings on both of these issues for Illinois adults will be presented in a following section of this report.

Table 3:
Percentage Point Differences Between the Employment Rates of
16-64 Year Old High School Dropouts and High School Graduates /
Adults with 1-3 Years of College in Illinois, 2005

	(A)	(B)	(C)
Groups Being Compared	All	Men	Women
High School Dropouts vs. High School Graduates, No College	-13.6	-9.8	-19.1
High School Dropouts vs. Adults With 1-3 Years of College	-21.8	-16.9	-29.5

Source: 2005 American Community Surveys, public use files, tabulations by authors.

The Annual Earnings of Illinois Adults by Educational Attainment, 2004-2005

The most comprehensive measure of the labor market success of adults during a calendar year is their annual earnings, which is influenced by their paid weeks of employment, weekly hours of work, and hourly earnings. The 2005 ACS survey collected data from each working-age individual on their annual earnings from paid employment, including self-employment, during the twelve month period immediately preceding the time of the ACS questionnaire's completion.¹⁵ The annual earnings data for all 16-64 year olds, including those with no paid employment, in each of the following six educational attainment categories were analyzed to estimate mean annual earnings for all Illinois adults and for men and women separately.¹⁶

- <12 or 12 years, no diploma or GED certificate
- High school diploma / GED, no post-secondary schooling
- 13-15 years, no college degree
- Associate's degree
- Bachelor's degree
- Master's or higher degree

¹⁵ The timing of this twelve month period will vary somewhat from one individual to another since ACS questionnaires were completed throughout the calendar year.

¹⁶ Those 18-24 year olds who were enrolled in high school or college at the time of the 2005 ACS survey were excluded from the earnings analysis.

The mean annual earnings of all Illinois adults 16-64 years old in 2004-2005 were \$33,606 (Table 4). The mean earnings of adults increased steadily and strongly with their educational attainment, ranging from a low of \$15,650 among high school dropouts, to nearly \$23,000 for high school graduates, to \$30,600 for those with an Associate's degree, and to a high of just under \$68,000 for those adults with a Master's or higher degree (Table 4 and Chart 4). The mean annual earnings of high school dropouts were approximately \$7,300 or 32% below those of high school graduates and nearly \$15,000 or 50% below those of their peers with an Associate's degree (Table 5).

Table 4:
Mean Annual Earnings of 18-64 Year Old Adults in Illinois by
Educational Attainment and Gender, including Zero Earners, 2005

	(A)	(B)	(C)
Educational Attainment	All	Men	Women
<12 or 12, no diploma or GED	\$15,650	\$21,421	\$8,472
H.S. diploma / GED	22,941	30,154	15,383
13 – 15 years, no degree	31,430	36,326	19,792
Associate's degree	30,586	40,104	22,354
Bachelor's degree	50,224	63,113	31,490
Master's or higher degree	67,884	85,574	44,768
All	33,606	44,279	23,362

Source: 2005 American Community Surveys, public use files, tabulations by authors.

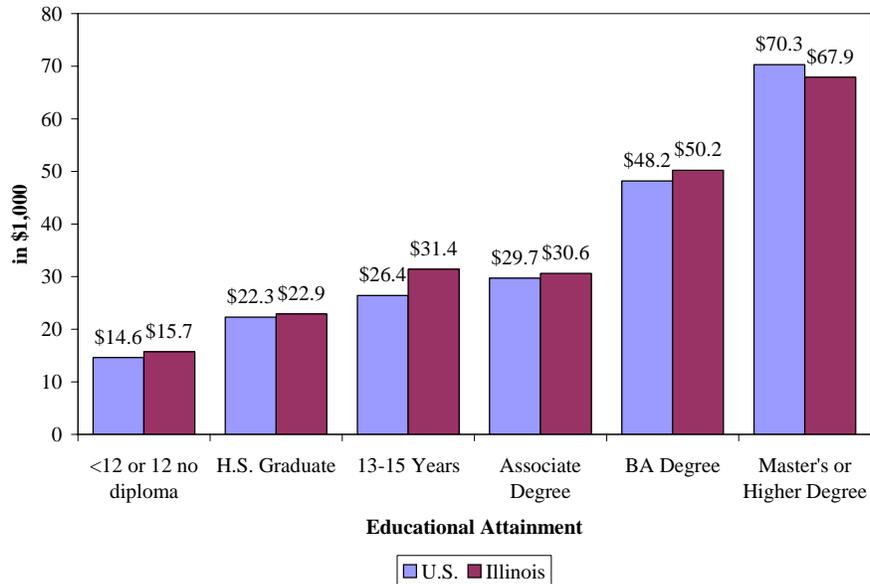
The mean annual earnings of Illinois male adults were nearly twice as high as those of women (\$44,279 versus \$23,362), reflecting a combination of higher mean weeks and weekly hours of employment among men than women and higher hourly earnings. For both gender groups, however, mean annual earnings increased consistently and substantially by years of schooling. Male dropouts obtained mean annual earnings of \$21,421 which were \$8,700 or nearly 30% below those of their male counterparts with a high school diploma / GED, and they were \$18,700 or 47% below those with an Associate's degree (Tables 4 and 5). Among women, the mean annual earnings of high school dropouts were only \$8,472, reflecting a combination of their low rate of employment during the year and their low earnings while employed. Adult female dropouts earned \$6,900 or 45% less than their peers with a high school diploma, and their mean annual earnings were nearly \$14,000 or 62% less than their peers who obtained an Associate's degree.

Table 5:
Absolute and Relative Size of the Differences Between the Mean
Annual Earnings of 18-64 Year Old High School Dropouts in
Illinois and Their Peers with High School Diplomas or Associate Degrees,
All and by Gender, 2005

Educational Groups Being Compared	<u>All</u>		Men		Women	
	(A)	(B)	(A)	(B)	(A)	(B)
	Absolute	Percent	Absolute	Percent	Absolute	Percent
High School Dropout vs. Graduate	\$-7,291	-32%	\$-8,733	-29%	\$-6,911	-45%
High School Dropout vs. Associate Degree Holder	-\$14,936	-49%	\$-18,683	-47%	\$-13,882	-62%

The size pattern of the mean annual earnings of Illinois adults by educational attainment was quite similar to that of their U.S. counterparts during 2004-2005. Illinois adults obtained modestly higher annual earnings than their U.S. peers in each educational attainment category except those with a Master's or higher degree, where U.S. adults out-earned their Massachusetts peers by \$2,400. In both areas, adults with a high school diploma / GED obtained mean annual earnings between \$7,000 and \$8,000 higher than those without a high school diploma, and adults with an Associate's degree obtained mean annual earnings twice as high as those of adults without a diploma.

Chart 4:
Comparisons of the Mean Annual Earnings of 18-64 Year Old
Adults by Educational Attainment in the U.S. and Illinois, 2005
(in \$1,000)



Mean Lifetime Earnings of Illinois Adults by Educational Attainment and Gender

Adults without high school diplomas have faced bleak employment and earnings prospects in Illinois during recent years. The labor market fortunes of these high school dropouts, especially among males, have been deteriorating over the past few decades and are likely to remain quite bleak in the immediate future. Over their working lives, dropouts will receive earnings considerably below those of their better educated peers. To illustrate the likely magnitude of these earnings losses from limited schooling, we have calculated the expected, mean lifetime earnings of Illinois adults in six educational subgroups. Our estimates of mean lifetime earnings are calculated by summing the mean annual earnings of all persons in a given educational group (e.g., high school dropouts) for each single age from ages 18 to 64 (Table 6).¹⁷ These earnings estimates for each age group are then summed to calculate expected mean lifetime earnings for each educational group in Illinois as of 2005. These cross-sectional lifetime earnings estimates are based on the assumption that the size of the mean earnings observed for

¹⁷ Our earnings estimates exclude individuals 18-22 years of age who were enrolled in school at the time of the 2005 ACS surveys. Otherwise, all individuals in a given age group are included in the calculations of the mean annual earnings estimates even if they had no paid employment.

persons in a given age and educational group in 2005 will prevail in the future as today's workers reach that age group. Given past declines in the real annual earnings of many Illinois adults with no post-secondary schooling, especially males, these assumptions of stable future earnings for workers with 12 or fewer years of schooling are likely quite optimistic.

Table 6:
Estimating the Expected Mean Lifetime Earnings of
High School Dropouts in Illinois from Ages 18-64
(Both Sexes Combined in 2005 Dollars)

Age Group	Mean Earnings
18	X_{18}
19	X_{19}
20	X_{20}
⋮	⋮
62	X_{62}
63	X_{63}
64	X_{64}
18-64	64 $\sum_{i=18} X_i$

Estimates of expected mean lifetime earnings for Illinois adults in six educational groups are displayed in Tables 7 and 8 and Chart 5. The lifetime earnings estimates are provided for all Illinois adults (18-64) and for men and women separately. The mean lifetime earnings for all Illinois adults from ages 18-64 was estimated to be \$1.580 million as of 2005 (Table 7). These mean lifetime earnings estimates varied considerably across the six educational groups, ranging from a low of \$723,000 among adults lacking a high school diploma/GED, to \$1.078 million among high school graduates, to \$2.210 million among Bachelor degree holders, and to a maximum of nearly \$3 million among adults with a Master's or higher degree (Table 7 and Chart 5). The mean lifetime earnings of high school graduates in Illinois exceeded those of high school dropouts by \$355,000, Associate degree holders were characterized by mean lifetime earnings \$359,000 higher than those of high school graduates, and Bachelor degree holders obtained mean annual earnings that were \$1.132 million above those of high school graduates. The average adult bachelor degree holder in Illinois would be expected to obtain three times the mean amount

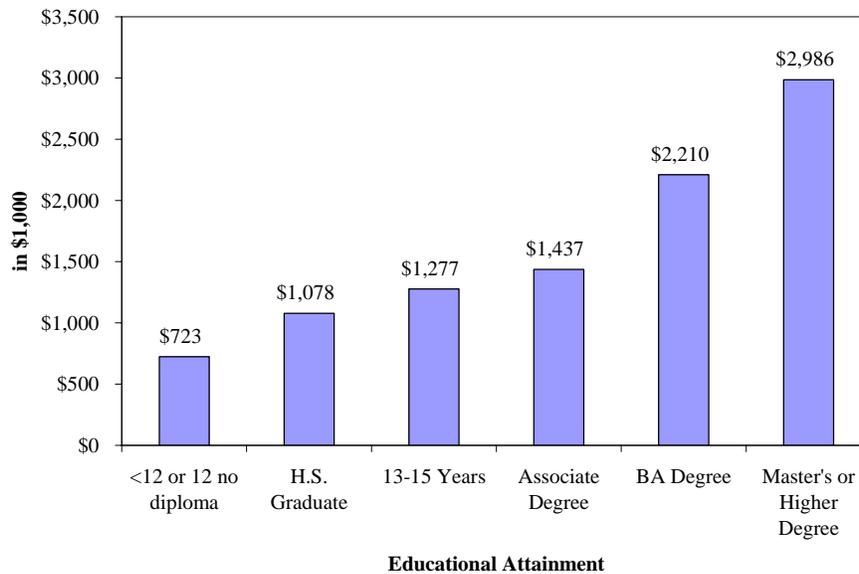
of earnings of a high school dropout over their working lifetimes (\$2.21 million versus \$723,000).

Table 7:
Mean Lifetime Earnings of 18-64 Year Old Illinois Adults by
Educational Attainment and Gender
(in \$1000s of 2005 Dollars)

	(A)	(B)	(C)
Educational Attainment	All	Men	Women
<12 or 12, no diploma	\$723	\$1,007	\$398
H.S. diploma / GED	\$1,078	\$1,417	\$723
13-15 years, no degree	\$1,277	\$1,707	\$930
Associate's degree	\$1,438	\$1,885	\$1,051
Bachelor's degree	\$2,210	\$2,966	\$1,480
Master's higher degree	\$2,986	\$3,765	\$2,104
All	\$1,580	\$2,081	\$1,098

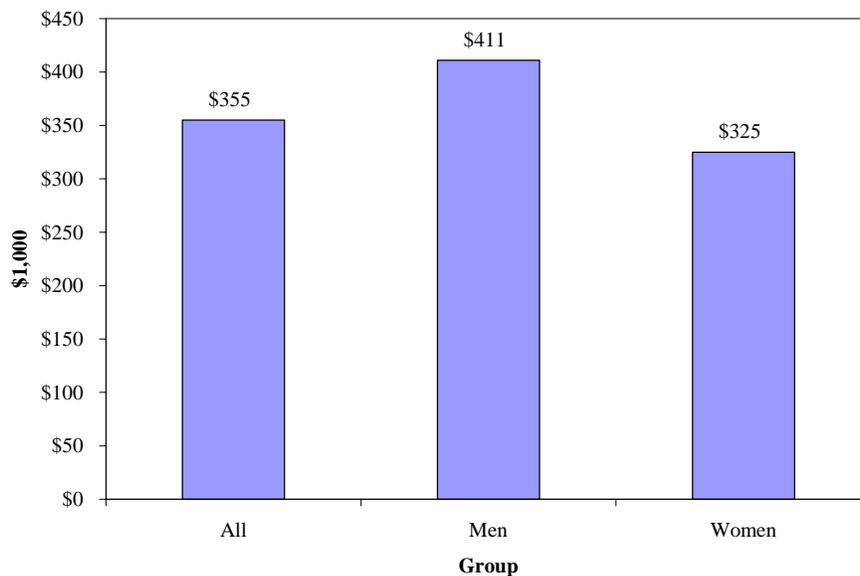
Source: 2005 American Community Surveys, public use files.

Chart 5:
Mean Lifetime Earnings of 18-64 Year Old Illinois Adults by Educational Attainment
(in 1000s of 2005 Dollars)



The size patterns of the lifetime earnings of men and women by educational attainment were quite similar, with large increments in expected earnings from completing additional levels of schooling (Tables 7 and 8). Among men, the mean lifetime earnings ranged from a low of \$1.007 million for those lacking a high school diploma, to \$1.417 million for high school graduates, and to high of \$3.765 million for men obtaining a Master’s or higher degree. Male high school graduates would be expected to earn \$411,000 more than high school dropouts, and Bachelor degree recipients would obtain \$1.549 million more than high school graduates (Table 8). A male bachelor degree holder would be expected to earn nearly \$2 million more than a high school dropout, a relative difference in lifetime earnings between these two groups of nearly three to one.

Chart 6:
Mean Lifetime Earnings Advantages of High School Graduates
Over High School Dropouts in Illinois, All and by Gender
 (2005, in \$1,000 of Dollars)



Among women, mean lifetime earnings also rose steadily and strongly with their years of schooling completed. Adult women who lacked a high school diploma/GED would be expected to earn only \$398,000 over their working lives, which is equivalent to mean annual earnings of only \$8,500 over their work lives. Those women with a diploma or a GED would obtain mean lifetime earnings of \$723,000 which was \$325,000 higher than that of their peers who failed to graduate from high school. Illinois women who obtain post-secondary degrees will substantially outearn their counterparts who terminated their schooling with a regular diploma or a GED

certificate. Associate degree holders will obtain \$328,000 more than high school graduates over their work lives while women with Bachelor degrees will outearn high school graduates by \$757,000 (Table 8). The mean lifetime earnings of Bachelor degree holders will exceed those of female high school dropouts by \$1.082 million. These Bachelor degree holders will obtain mean lifetime earnings 3.7 times as high as those of high school dropouts.

Table 8:
Differences Between the Mean Lifetime Earnings of
Illinois Adults in Selected Educational Groups, All and by Gender
(2005, in \$1,000)

	(A)	(B)	(C)
Educational Groups Being Compared	All	Men	Women
H.S. Graduate vs. High School Dropout	\$355	\$411	\$325
Associate Degree vs. High School Graduate	\$359	\$467	\$328
Bachelor's Degree vs. High School Graduate	\$1,132	\$1,549	\$757
Bachelor's Degree vs. High School Dropout	\$1,487	\$1,960	\$1,082

Sources of the Lifetime Earnings Advantages of Better Educated Adults in Illinois

Why are the lifetime earnings of Illinois adults with limited schooling so low? What labor market factors account for the considerably higher earnings of adults with higher levels of schooling? Key insights into these two questions can be gleaned by estimating the mean lifetime hours of work of Illinois adults and their mean hourly earnings from employment. We have used findings from the 2005 ACS surveys in Illinois to construct estimates of the cumulative hours of work by adults in each educational attainment group from ages 18-64.¹⁸ We then divided the mean lifetime earnings of adults in each educational group by mean lifetime hours of work to calculate mean hourly earnings over the lifetime. To facilitate the interpretation of the findings on lifetime work hours, we converted the estimates into annual hour equivalents by dividing then by 47, the number of years of potential work over the 18-64 year old age span. Our estimates are displayed in Table 9 and Chart 7.

¹⁸ The ACS surveys collected data on the number of paid weeks of employment all working-age respondents in the prior twelve month period. For those who were employed at some point during this period, data were collected on average hours of work per week. We then estimated annual hours of paid work by multiplying weeks worked by mean hours of work per week. Those persons with no paid weeks of employment in the prior 12 month period were assigned 0 hours of work for the year. We then computed mean annual hours of work for persons in each of the six educational groups by single age from 18 to 64.

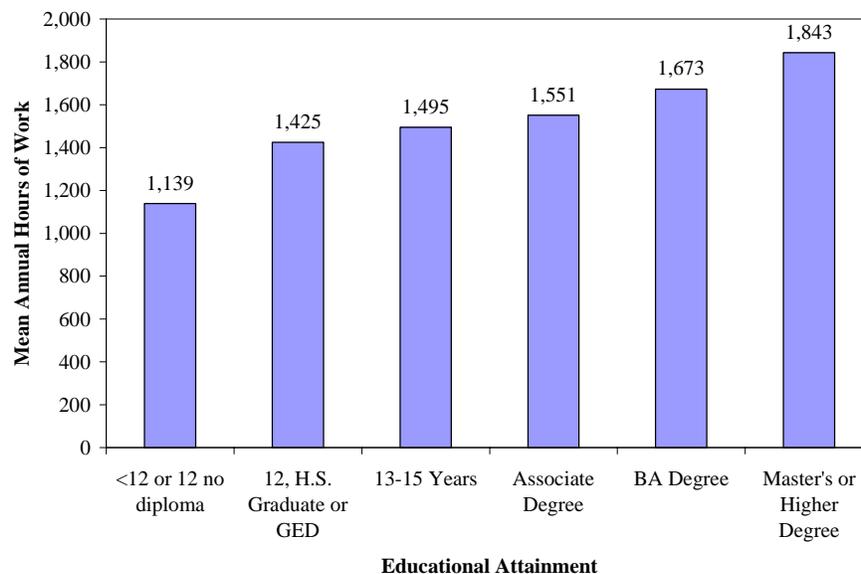
Table 9:
Mean Annual Lifetime Hours of Work and Mean Lifetime
Hourly Earnings of Illinois Adults by Educational Attainment
 (Based on 2005 Cross-Sectional Data)

Educational Attainment	(A) Mean Annual Hours of Work	(B) Mean Hourly Earnings
<12 or 12, no diploma or GED	1,139	\$13.51
H.S. diploma / GED	1,425	\$16.10
13-15 years of school, no degree	1,495	\$18.18
Associate's degree	1,551	\$19.72
Bachelor's degree	1,673	\$30.02
Master's or higher degree	1,843	\$36.84

Mean annual hours of paid work over the lifetime in Illinois varied considerably across the six educational groups.¹⁹ They ranged from a low of 1,139 hours of work per year among those with no high school diploma or GED to 1,425 among high school graduates and to highs of 1,673 for Bachelor degree recipients and 1,843 for those with a Master's or higher degree (Table 9). High school graduates worked approximately 25 per cent more hours per year than high school dropouts, and adults with Bachelor degrees would work about 17% more hours per year than high school graduates (Table 9 and Chart 7).

¹⁹ The data on weeks of employment included paid weeks of vacation, sick leave, and military duty.

Chart 7:
Mean Annual Lifetime Hours of Work Among Illinois Adults from
Ages 18-64 by Educational Attainment



Mean hourly earnings from paid employment over the lifetime for Illinois adults also varied widely across educational subgroups. These mean hourly earnings were, as expected, lowest for high school dropouts at \$13.51, and they then rose steadily and substantially as workers acquired additional years of schooling. Employed high school graduates obtained mean hourly earnings of \$16.10, which were \$2.60 or nearly 20 per cent higher than those of high school dropouts while Bachelor degree recipients received mean hourly wages of \$30 and those with more advanced academic degrees obtained nearly \$37 per hour (Table 9).

The low hourly earnings of high school dropouts and the declining real hourly earnings of male high school graduates over the past two decades have had adverse effects on the labor supply behavior of members of these two groups. National research has shown that the labor supply behavior of young male and female dropouts, single mothers, and low income women is positively influenced by their expected market wages from employment.²⁰ The higher their expected market wage, the higher is their probability of being an active member of the labor

²⁰ See: (i) Stephanie Aaronson, Looking Ahead: Young Men, Wage Growth, and Labor Market Participation, Ph.D. Dissertation, Columbia University, January 2000; (ii) Neeta Fogg, An Economic Analysis of the Determinants and the Long Term Labor Market Consequences of Teenage Childbearing in the United States, 1979-1991, Ph.D. Dissertation, Department of Economics, 1997; (iii) John W. Graham and Andrea H. Beller, "The Effect of Child Support Payments on the Labor Supply of Female Family Heads", Journal of Human Resources, Vol. 27, No. , 1989, pp. 664-688.

force and the higher is their annual hours of labor supply. Workforce development strategies capable of boosting the productivity and market wages of adult dropouts in Illinois can boost their annual earnings both directly through higher wages and indirectly by increasing their willingness to supply more hours of paid work during the year. Illegal immigration into the state by increasing the supply of less educated workers has both depressed market wages of native born dropouts, especially Blacks and Hispanics, and has led to high displacement of young native born males with no post-secondary schooling. By failing to enforce existing immigration laws, both federal and state authorities have contributed to the declining wages and earnings of native born workers and legal immigrants with limited formal schooling in the United States.

Time Trends in the Lifetime Earnings of Illinois Male and Female Adults by Educational Attainment

The above findings have highlighted both the limited lifetime earnings of male and female adult dropouts in Illinois and the large disparities in the earnings of adults by educational attainment. Over the past few decades in the U.S., the degree of wage and earnings inequality has widened considerably, with growing gaps between the mean earnings of adults across and within educational levels. The absolute and relative size of the earnings gaps between the highest and lowest paid workers in the nation have increased sharply since the end of the Golden Era of the U.S. economy in 1973.²¹ After moderating during the labor market boom years from 1995-2000, earnings gaps have accelerated again since the end of the national labor market boom in early 2001.

To identify trends in the expected lifetime earnings of male and female adults by educational attachment over the past few decades, we have analyzed the findings of the decennial censuses for 1980, 1990, and 2000 to calculate expected lifetime earnings for Illinois men and women in five educational groups in 1979, 1989, and 1999. Findings for each of these years were then compared to those based on the 2005 ACS surveys. Lifetime earnings for each of the prior time periods were converted into constant 2005 dollars via use of the Consumer Price Index for All Urban Consumers (CPI-U).

²¹ For a review of trends in earnings and income inequality in the U.S. since the end of the Golden Era and the economic, technological, and demographic forces underlying this rise in economic, inequality, See: Ray Marshall (Editor), Back to Shared Prosperity: The Growing Inequality of Wealth and Income in America, M.E. Sharpe, Armonk, New York, 2000.

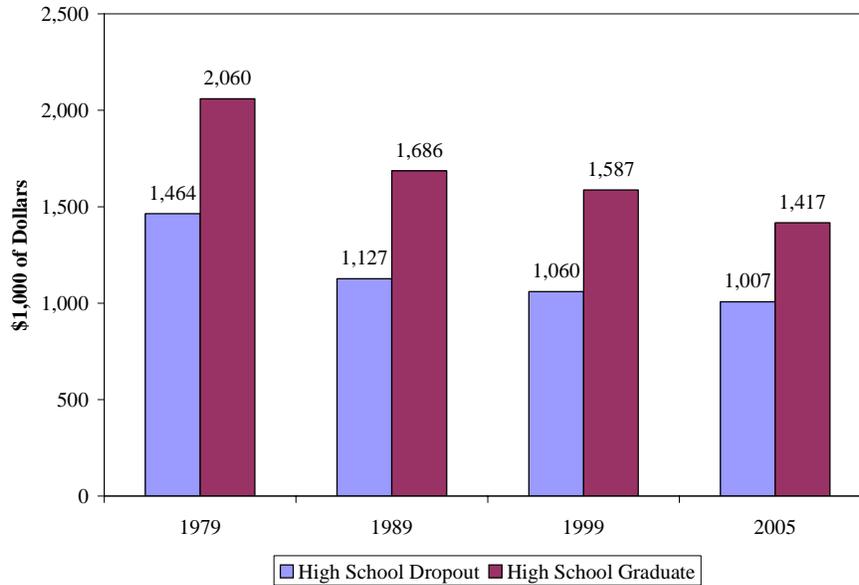
The mean lifetime earnings of male high school dropouts in Illinois have declined considerably and consistently since the end of the 1970s (Table 10 and Chart 8). In 1979, the estimated mean lifetime earnings of male dropouts were estimated to be \$1.464 billion. The mean lifetime earnings of this group of men in Illinois declined sharply in the 1980s and more modestly in the 1990s (\$67,000 or 6%). Between 1999 and 2005, the mean lifetime earnings of male high school dropouts in Illinois fell by another \$53,000 or 5%. Over the entire 1979-2005 period, mean lifetime earnings of these male dropouts fell by \$457,000 or 31%, an extraordinary rate of earnings decline that contributed to the steep decline in marriage rates and family formation among this group of men, with an accompanying rise in single parent families and their high rates of poverty and dependency.

Table 10:
Trends in the Mean Lifetime Earnings of Male Adults From Ages 18-64 by
Educational Attainment Over the 1979 to 2005 Period
(in 1000s of Constant 2005 CPI-U Dollars)

	(A)	(B)	(C)	(D)	(E)	(F)
Educational Attainment	1979	1989	1999	2005	1999 – 2005	1979 – 2005
Less than 12 or 12, no diploma or GED	\$1,464	\$1,127	\$1,000	\$1,007	-5.0	-31.2
H.S. diploma / GED	2,060	1,686	1,587	1,417	-10.7	-31.2
Some college	2,304	2,066	2,003	1,835	-8.4	-20.4
Bachelor's degree	2,901	3,066	3,113	2,966	-4.7	+2.2
Master's or higher degree	3,217	3,644	3,953	3,765	-4.7	17.1
All	2,130	2,068	2,170	2,081	-4.1	-2.3

Source: (i) 1980, 1990, and 2000 Censuses of Population and Housing, public use files;
(ii) 2005 American Community Surveys, public use files.

Chart 8:
Trends in the Mean Lifetime Earnings of Male
High School Dropouts and Graduates in Illinois, 1979 to 2005
 (in Constant 2005 Dollars)



Male high school dropouts were unfortunately not the only group of men to experience steep declines in their lifetime earnings over the 1979-2005 period. High school graduates and those men with only a few years of post-secondary schooling also saw their real earnings drop precipitously over this same 26 year period. Mean lifetime earnings of male high school graduates fell by \$643,000 or 31% while their peers with 1-3 years of college experienced a near \$470,000 or 20% decline in their mean lifetime earnings. Only those males with a Bachelor's or higher academic degree had higher lifetime earnings in 2005 than they did in 1979, with all of these gains taking place by the end of the 1990s.²² In 1979, male high school dropouts in Illinois had lifetime earnings slightly more than one-half as high as those of Bachelor degree holders. By 2005, the mean lifetime earnings of male dropouts had declined to only one-third of those of Bachelor degree holders in the state. The earnings gaps between the state's best educated males and those with 12 or fewer years of schooling had increased considerably, creating a widening gulf in personal earnings and incomes among males in the state.

²² Every educational group of males in Illinois experienced declines in their mean lifetime earnings between 1999 and 2005, with the relative size of these declines being 5% or larger for each of the five educational groups.

In sharp contrast to the experiences of men, women's, mean lifetime earnings increased substantially over the past 26 years, rising from \$692,000 in 1979 to \$1.098 million in 2005, a gain of \$406,000 or close to 60 per cent (Table 11). These large gains in lifetime earnings for the average woman were generated by a combination of increased weeks and hours of employment during the year and rising hourly earnings. Not all educational groups of women shared in these earnings gains. Among those women lacking a high school diploma / GED, mean lifetime earnings in 2005 were \$31,000 or 7% below where they were in 1979 despite strong gains in earnings among these women during the decade of the 1990s. The mean lifetime earnings of high school graduates rose by 10% over this 26 year period, and women with 1-3 years of college boosted their lifetime earnings by 25%. The largest gains in mean lifetime earnings took place among women with a Bachelor's or higher degree. Their mean lifetime earnings rose by 46 to 48 per cent.²³ In 1979, an adult woman with a Bachelor's degree had mean lifetime earnings that were \$573,000 above those of women lacking a high school diploma, a relative difference of 133%. By 2005, the gap between the lifetime earnings of these two groups of women had widened to \$1.082 million, with Bachelor degree holders obtaining lifetime earnings 3.7 times as high as those of their counterparts lacking a high school diploma. Those women without a diploma were considerably less likely to be married in 2005 than they were in 1979 although many were single mothers. Children raised in these single parent families where the mother lacked a high school diploma were the most poverty prone group of children in the state in 2005, placing them at jeopardy of a wide array of developmental problems including low cognitive skills, mal-nutrition, poor health, and school failure.

²³ The per cent growth in the expected mean lifetime earnings of all women rose by 59%, exceeding the growth rates for women in each of the five educational subgroups. This result was attributable to the fact that the educational attainment of Illinois women improved over the decade, with a sharp rise in the share of women with a Bachelor's or higher degree.

Table 11:
Trends in the Mean Lifetime Earnings of Female Adults by
Educational Attainment from Ages 18-64 Over the 1979 to 2005 Period
(in \$1000)

	(A)	(B)	(C)	(D)	(E)	(F)
Educational Attainment	1979	1989	1999	2005	1999 – 2005	1979 – 2005
Less than 12 or 12, no diploma or GED	\$429	\$417	\$486	\$398	-18.1	-7.1
H.S. diploma / GED	\$654	\$702	\$783	\$723	-7.7	+10.5
Some college	\$816	\$940	\$1,093	\$1,024	-6.3	+25.4
Bachelor's degree	\$1,002	\$1,275	\$1,526	\$1,480	-3.0	+47.8
Master's or higher degree	\$1,437	\$1,713	\$2,026	\$2,104	3.8	+46.4
All	\$692	\$871	\$1,096	\$1,098	.2	+58.7

Source: (i) 1980, 1990, and 2000 Censuses of Population and Housing, public use files;
(ii) 2005 American Community Surveys, public use files.

Educational Attainment and Income Inadequacy Problems Among Illinois Adults

The limited employability and earnings of Illinois adults without high school diplomas can be expected to increase their exposure to various types of income inadequacy problems.²⁴ We have used three different sets of income criteria to classify the income inadequacy status of an adult at the time of the 2005 ACS survey:

- Poor. A person who is a member of a family with a combined money income below the federal government's official poverty income thresholds.²⁵ In 2004, a family of four with a pre-tax money income below \$18,600 would have been classified as poor.
- Poor or near poor. A person who is a member of a family with a combined money income below 125 per cent of the federal government's poverty income thresholds.
- Low income. A person who is a member of a family with a combined money income below 200 per cent of the federal government's poverty income thresholds.

²⁴ For a review of these alternative definitions of income inadequacy including the low income definition, See: (i) Garth Mangum, Stephen Mangum, and Andrew Sum, The Persistence of Poverty in the United States, Johns Hopkins University Press, Baltimore, 2003; (ii) Gregory Acs, Katherine Ross Phillips, and Daniel McKenzie, Playing by the Rules but Losing the Game: America's Working Poor, Urban Institute, Washington, D.C., May 2000.

²⁵ Persons living on their own or with others to whom they are not related are treated as a family of one in determining their poverty status.

Findings on the weighted average income thresholds by family size used to define the poverty, poverty / near poverty, and low income status of persons in both Illinois and the U.S. during 2005 are displayed in Table 12. The values of these poverty income thresholds ranged from a low of \$10,160 for an unrelated individual under age 65,²⁶ to \$12,755 for a two person family, to just under \$20,000 for a four person family, and to a high of \$40,288 for families containing 9 or more persons. A family with a combined money income for the year below the poverty threshold is categorized as poor. The poor / near poor income thresholds are set at 125% of the poverty line while the low income thresholds are set at twice the poverty line. These low income thresholds ranged from slightly over \$20,000 for a single individual under the age of 65 to just under \$40,000 for a four person family, and to \$53,366 for a family containing six persons.

Table 12:
Weighted Average Poverty Thresholds, 125% of Poverty Thresholds, and Low Income
Thresholds for Single Persons and Families Containing Two to Nine Persons, 2005

Family Size	(A) Weighted Average Poverty Threshold	(B) 125% of Poverty Threshold	(C) Low Income (200% of Poverty) Threshold
One person (unrelated)	9,973	12,446	19,946
• Under 65 years	10,160	12,700	20,320
• 65 years and older	9,367	11,709	18,734
Two	12,755	15,944	25,510
Three	15,577	19,471	31,154
Four	19,971	24,964	39,942
Five	23,613	29,516	47,226
Six	26,683	33,354	53,366
Seven	30,249	37,811	60,498
Eight	33,610	42,013	67,220
Nine or More	40,288	50,360	80,576

Source: U.S. Census Bureau.

The findings of the 2005 American Community Surveys in Illinois were used to identify the poverty, poverty / near poverty, and low income status of each Illinois adult ages 18-64 years

²⁶ Persons living by themselves or with others to whom they are not related are treated as a family of one in determining their poverty status. A separate, somewhat lower poverty income threshold is set for individuals over the age of 65. Our analysis, however, is restricted to adults between the ages of 18-64.

old. We estimated the incidence of these three income inadequacy problems for adults by single age group in each of six educational groups. The findings were then summed across each age group to estimate the number of years that an adult with a given level of educational attainment could be expected to experience each of these three problems over their work lives from ages 18-64. Key findings of our analysis are displayed in Table 13 and Charts 9 and 10.

Table 13:
Mean Years Spent in a Poverty, Poverty / Near Poverty, or Low Income
Status by Illinois Adults Ages 18-64 by Educational Attainment
(2005 Cross Sectional Data)

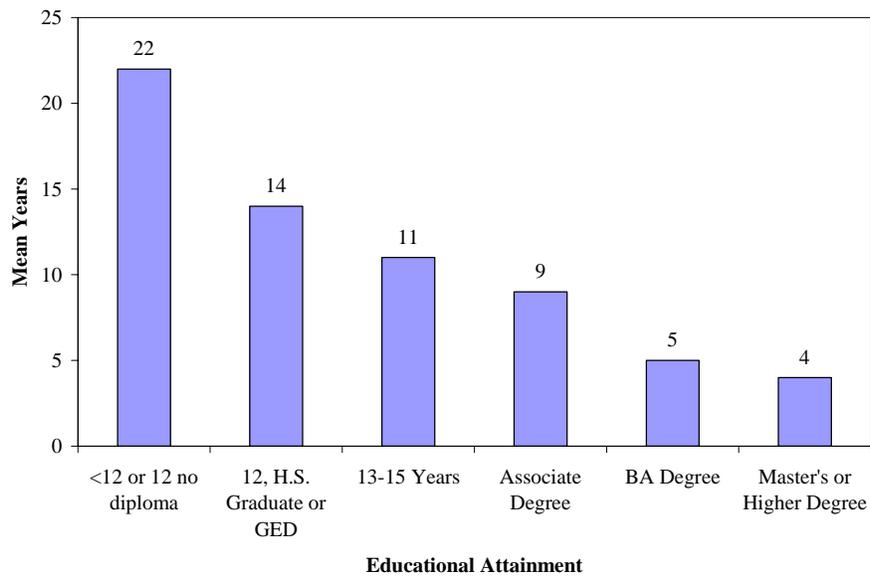
	(A)	(B)	(C)
Educational Attainment	Poor	Poor / Near Poor	Low Income
<12 or 12, no diploma	11.6	13.2	23.2
H.S. diploma / GED	5.6	6.3	12.9
13 – 15 years	4.4	4.7	9.7
Associate’s degree	3.8	4.4	8.8
Bachelor’s degree	2.2	2.8	5.5
Master’s or higher degree	1.6	2.0	4.0
All	5.1	5.9	11.4

On each of the three income inadequacy measures, adults who failed to graduate from high school or obtain a GED certificate were considerably more likely to experience an income inadequacy problem and, thus, be expected to spend more years with inadequate incomes. The average adult high school dropout in Illinois would be expected to spend 11.6 years of their work lives in poverty, a duration equivalent to just under 25 per cent of their work lives from ages 18-64. High school dropouts would spend twice as many years in poverty as their peers who graduated from high school but did not complete any years of post-secondary schooling (11.6 vs. 5.6). High school dropouts would be expected to spend five times as many years in poverty as their counterparts who graduated from college with a Bachelor’s degree (11.6 years vs. 2.2 years respectively).

High school dropouts would spend 13.2 years with incomes below 125% of the poverty line (Table 13). This mean number of years in poverty / near poverty conditions was more than twice that of high school graduates (13.2 years vs. 6.3 years) and nearly five times as high as that of Bachelor degree recipients. When the income inadequacy threshold is raised to twice the poverty line, the per cent of dropouts who fall below the adequacy threshold rises sharply. Mean

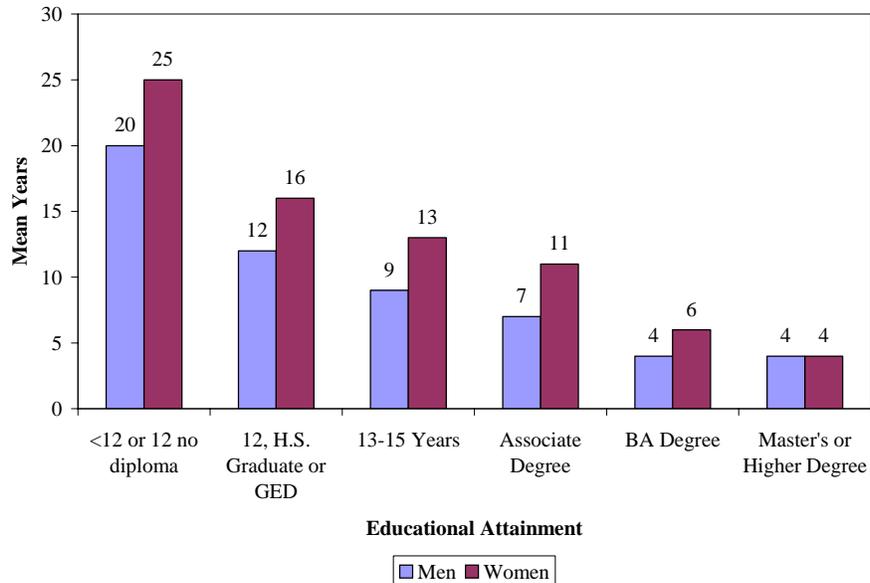
expected years in a low income status for high school dropouts in Illinois was 23.2 (Table 13 and Chart 9). On average, dropouts in Illinois will spend half of their adult work lives living in a low income status. Problems of low incomes among dropouts are, thus, pervasive throughout their adult working-age years. Their mean expected number of years in a low income status was 80% higher than that of high school graduates and four times higher than that of Bachelor degree holders.

Chart 9:
Mean Expected Years in a Low Income Status Among
Illinois Adults from Ages 18-64 by Educational Attainment



The links between educational attainment and the low income status of Illinois adults were quite strong for both men and women. For both gender groups, adults who left school without a diploma would spend a considerably greater number of years in a low income status than their better educated peers. Among women, female dropouts would be expected to fall below the low income threshold for 25 years over the 18-64 life span, or 53% of the total years available (Chart 10). In each educational attainment group, except those with a Master's or higher degree, women were expected to spend more years in a low income status than their male counterparts. For both gender groups, adult high school dropouts would spend four to five times as many years in a low income status than their peers who obtained a Bachelor's degree.

Chart 10:
Mean Expected Years in a Low Income Status Among
Illinois Men and Women from Ages 18-64 by Educational Attainment



The Self-Reported Health Status By Level of Educational Attainment

In addition to the large gaps in employment, earnings, and income outcomes between high school dropouts and their better educated peers, there are also a variety of health outcomes that are linked to the educational attainment of adults, including health insurance coverage, access to medical care, overall health status, exposure to various illnesses and diseases, disability problems, and life expectancy. Adults with lower levels of schooling are less likely to receive medical care, more likely to report poorer health, and much more likely to report physical or mental disabilities.

The health conditions of U.S. adults tend to vary fairly widely across educational attainment and income groups. Better educated adults are more likely to be covered by some form of private health insurance, to enjoy higher levels of health insurance coverage from their employers, to have visited a doctor in the past year, to receive better medical care, to be in better health, and to live longer than their less educated and less literate peers.²⁷ In recent years, the

²⁷ Findings of the National Longitudinal Survey of Youth (NLSY79) reveal that better educated adults and those with stronger literacy / numeracy proficiencies are considerably more likely to be alive in their late 30s to mid-40s than their less educated and less literate peers. High school dropouts are twice as likely as high school graduates and four times more likely than four year college graduates to be deceased.

U.S. Census Bureau has collected information through the March CPS survey from a sample of U.S. adults on their self-reported health status. Respondents to the March 2006 CPS survey were asked to rate their current health status. The allowable responses consisted of the following five categories:

- Excellent
- Very good
- Good
- Fair
- Poor

We have analyzed the responses to this health status question by 18-64 year old adults in Illinois and the U.S. by their educational attainment. Key findings are displayed in Table 14 and Chart 11. Overall, 67 per cent of Illinois adults in the 18-64 year old age group reported that they were either in excellent or very good health in March 2006 (Table 14). The proportion of adults rating their health status as excellent or very good ranged from a low of 49 per cent among those adults lacking a high school diploma / GED to just under 60 per cent among high school graduates and to highs of 78 to 84 per cent among bachelor degree recipients and those with a Master's or more advanced academic degree Table 14 and Chart 11. Only 9 per cent of Illinois adults rated their health status as "fair" or "poor". The fraction of Illinois adults in this health status category ranged from a high of 18 per cent among those lacking a high school diploma / GED certificate to 10% among high school graduates and to lows of 4% among those with a Bachelor's or higher degree. Thus, adult high school dropouts in Illinois were nearly twice as likely as high school graduates to report being in only fair or poor health and were more than four times as likely to do so as their counterparts with a Bachelor's or more advanced degree.

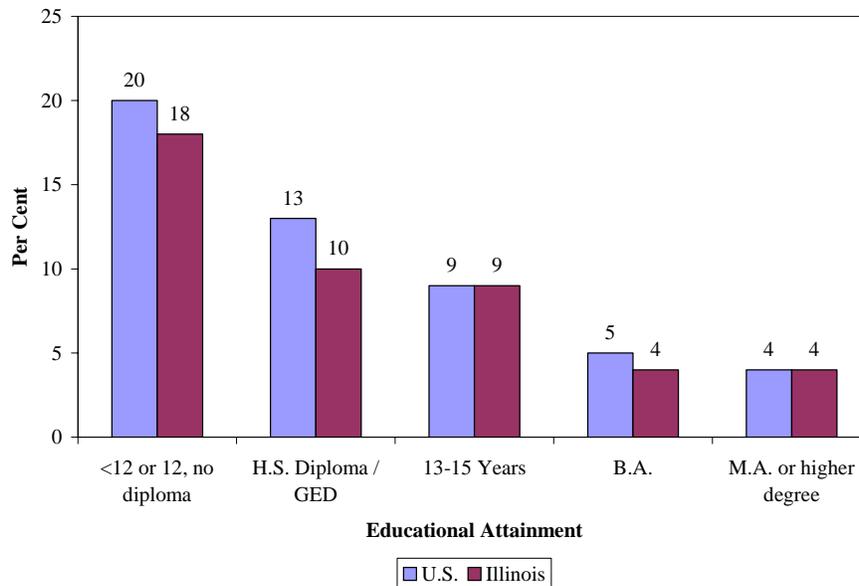
See: Andrew Sum and Mykhaylo Trubs'kyy, "The Health Status and Survival Rates of Middle Aged Adults by Literacy Level and Educational Attainment: Findings of the National Longitudinal Survey of Youth (NLS79)," Center for Labor Market Studies, Northeastern University, Working Paper Series, December 2006.

Table 14:
Self-Assessments of the Health Status of 18-64 Year Old Adults in
Illinois by Educational Attainment, March 2006
(in %)

Educational Attainment	(A)	(B)
	Per Cent Reporting Excellent or Very Good Health	Per Cent Reporting Fair or Poor Health
<12 or 12, no diploma or GED	49	18
H.S. Graduate / GED	59	10
13 – 15 years of school, including Associate degree holders	68	9
B.A. degree	78	4
M.A. degree	84	4
All	67	9

Source: March 2006, Current Population Surveys (CPS), public use files, tabulations by authors.

Chart 11:
Per Cent of 18-64 Year Old Adults in Illinois and the U.S.
Reporting Their Health Status as Fair or Poor, March 2006



The pattern of findings on the self-reported health status of adults by educational attainment in Illinois was quite similar to that of the U.S. (Chart 11). In the nation, 18-64 year old adults with no formal schooling beyond high school were modestly more likely than their Illinois counterparts to report being in fair or poor health: 20 per cent of high school dropouts

and 13% of high school graduates versus 18% and 10% of Illinois dropouts and graduates, respectively. Among those adults with at least some post-secondary schooling, the share of U.S. and Illinois adults reporting fair or poor health were essentially identical. The poorer health of less educated adults will lead to higher future medical outlays, a major part of which is financed by the Medicaid system, lower rates of employment, lower earnings, and lower life expectancy. Since less educated adults are in poorer health, they can be expected to report disability problems more frequently than their better educated counterparts in Illinois. To determine the degree of these relationships between the educational attainment of Illinois adults and their physical / mental disability status, we analyzed the findings of the 2005 American Community Surveys. Less educated, disabled adults are also considerably more likely to be jobless and dependent on cash public assistance income to support themselves and their families.

The Disability Status of Illinois Adults By Educational Attainment

The 2005 American Community Surveys collected information from respondents on their disability status at the time of the survey. Any measure of the “disabled population” is dependent on both a definition of the “disabled” and a household survey or administrative data reporting system that will generate the needed data on the number of individuals meeting the requisite criteria. The definition of the “disabled” that underlies the estimates of the disabled population in Illinois in this paper is the same as that used by the U.S. Census Bureau in its official estimates of the nation’s disabled population from the ACS survey and exactly the same as that used by the Rehabilitation Research and Training Center of Cornell University in its analysis of state and national data from the American Community Surveys.²⁸ According to this definition, an individual in the ACS surveys will be classified as “disabled” if he or she meets any one of the following six criteria. The information on disability status is based on the self-reports of respondents to the ACS questionnaire and is not tied to the receipt of any cash assistance from the local, state, or federal government for the disabled or their participation in any vocational rehabilitation program. These six criteria are the following:

²⁸ For a more detailed review of these ACS-based disability concepts and measures, see: Rehabilitation Research and Training Center on Disability Demographics and Statistics, 2004 Disability Status Reports, Cornell University, www.disabilitystatistics.org.

- Person has any of the following long lasting conditions: blindness, deafness, or a severe vision or hearing problem
- Person has a long lasting condition that “substantially limits one or more basic physical activities,” such as walking, climbing stairs
- Because of a physical, mental, or emotional condition lasting 6 months or more, this person has difficulty “learning, remembering, or concentrating”
- Because of a physical, mental, or emotional condition lasting 6 months or more, this person has difficulty “dressing, bathing, or getting around inside the home”
- Because of a physical, mental, or emotional condition lasting 6 months or more, this person has difficulty “going outside the home alone to shop or visit a doctor’s office”
- Because of a physical, mental, or emotional condition lasting 6 months or more, this person has difficulty “working at a job or business”.

Individual respondents to the ACS survey were allowed to check more than one disability type. As revealed in an earlier research paper by the authors, there is a fairly high degree of overlap among a number of these six disability categories.²⁹ For example, persons reporting work-related disabilities often cite one or more other disabilities and are far less likely to be employed than those adults citing other types of disabilities.

According to findings from the ACS 2005 survey, the incidence of self-reported disabilities varied substantially by level of educational attainment among adults in Illinois and the U.S. In Table 15, the incidence of disability problems among 16-64 year olds by their level of educational attainment is displayed for the U.S. and Illinois separately. Disability rates were somewhat lower in Illinois than in the U.S. for each educational attainment group. In both the United States and the state of Illinois, high school dropouts were the most likely to report a disability (23% and 20%, respectively). The estimated incidence of disability problems declined steadily with higher levels of educational attainment. In Illinois, 20% of 16-64 year olds lacking a high school diploma reported a disability problem while the incidence of disability problems among high school graduates with no postsecondary schooling was only 13%, seven percentage

²⁹ See: Andrew Sum, Ishwar Khatiwada, Paulo Tobar, Sheila Palma, et al., The Adult Disabled Population (16-74) in Massachusetts: Its Size and Demographic/Socioeconomic Composition in 2003-2004, Prepared for The Commonwealth Corporation and Massachusetts Rehabilitation Commission, Boston, March 2006.

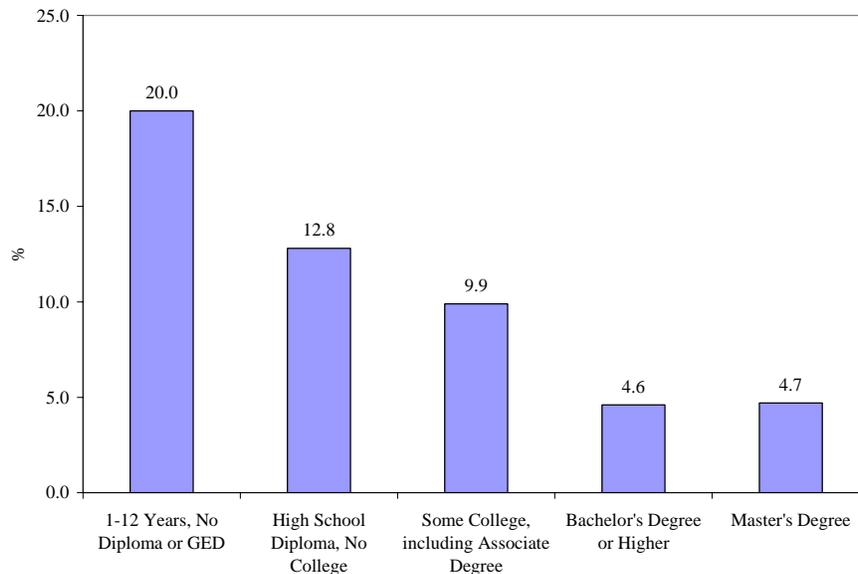
points lower than that of high school dropouts (Chart 12). The estimated disability incidence fell to 10% for those individuals with some postsecondary schooling, and the lowest incidences of disability were reported by those adults holding Bachelor degrees and Master or higher degrees. A similar pattern was observed for adults across the entire nation (Table 15).

Table 15:
The Incidence of Disability Problems Among 16-64 Year Olds by
Level of Educational Attainment in Illinois and the U.S., 2005
 (Excluding Individuals Enrolled in School)

Educational Attainment	(A)	(B)
	Illinois (in %)	U.S. (in %)
1-12 Years, No Diploma or GED	20.0	23.1
High School Diploma, No College	12.8	14.9
Some College, Including Associate degree holders	9.9	12.4
Bachelor's Degree	4.6	6.0
Master's Degree or higher	4.7	5.7

Source: 2005 American Community Surveys, public use files, tabulations by authors.

Chart 12:
Incidence of Disability Problems Among 16-64 Year Olds by
Level of Educational Attainment, Illinois, 2005 (in %)



The Link Between Disability Problems, Educational Attainment, and Employment

Previous research at the national and state level has shown that the likelihood of a person with a disability being employed is strongly linked to his or her level of educational attainment. Employment rates for persons with disabilities tend to increase steadily with their level of educational attainment.³⁰ In Illinois, those individuals with disabilities who lacked a high school diploma were characterized by the lowest employment rate (26%) among the five educational attainment groups (Table 16). In comparison, 37% of those individuals with disabilities that had obtained a high school diploma were employed during 2005. Employment rates were considerably higher for those individuals with disabilities who held a Bachelor's or higher degree (51 and 67 percent, respectively). Persons with disabilities who lacked a high school diploma were only one-half as likely to be employed as those with a Bachelor's degree. Fewer than one in every four persons with a disability in the U.S. who did not earn a high school diploma reported that they were working in 2005. In the U.S., the pattern of employment rates of persons with disabilities by level of education was quite similar to that observed in Illinois (Table 16). The higher the level of schooling, the greater the likelihood that a disabled individual would be employed.

³⁰ See: Ishwar Khatiwada, Andrew Sum, Joseph McLaughlin, with Paulo Tobar and Sheila Palma, et.al., The Labor Force Behaviors, Employment and Earnings Experiences, and Labor Market Problems of the Disabled Working-Age Population in Massachusetts, New England, and the U.S. in 2003 and 2004, Prepared for The Commonwealth Corporation and Massachusetts Rehabilitation Commission, Boston, June 2006.

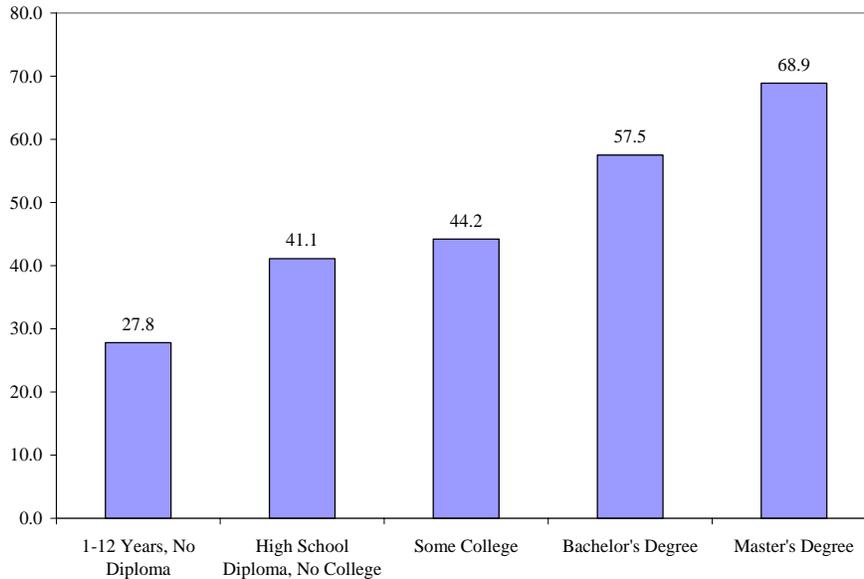
Table 16:
Employment/Population Ratios of 16-64 Year Old Persons With Disabilities by Their
 Level of Educational Attainment, Illinois and U.S., All and by Gender, 2005 (in %)

Educational Attainment	(A)	(B)
	Illinois	U.S.
All	38.6	37.4
1-12 Years, No Diploma or GED	26.1	23.9
High School Diploma, No College	37.1	36.6
Some College	44.0	44.0
Bachelor's Degree	51.3	53.4
Master's Degree or higher	63.7	58.3
Men		
Total	40.8	40.7
1-12 Years, No Diploma or GED	27.8	27.8
High School Diploma, No College	41.1	40.9
Some College	44.2	47.0
Bachelor's Degree	57.5	56.7
Master's Degree or higher	68.9	60.7
Women		
Total	36.5	34.2
1-12 Years, No Diploma or GED	24.4	19.9
High School Diploma, No College	33.1	32.4
Some College	43.8	41.5
Bachelor's Degree	44.6	50.3
Master's Degree or higher	59.9	56.1

Source: 2005 American Community Surveys, public use files, tabulations by authors.

The links between educational attainment and employment rates were particularly strong among disabled men in Illinois (Chart 13). Of those men with a reported disability who lacked a high school diploma, only 28% were working on average during 2005. Their employment rate was 14 percentage points lower than that of male disabled adults with a high school diploma and 41 percentage points below that of their male, disabled counterparts with a Master's degree. Male high school dropouts were the most likely to report a disability, and male dropouts with disabilities have considerably lower employment rates than more educated disabled male adults. Very similar relationships prevailed among disabled women in the state. Only 1 in 4 disabled women with a disability was employed in 2005.

Chart 13:
Employment/Population Ratios Of 16-64 Year Old Men With Disabilities By Their Level of Educational Attainment, Illinois, 2005 (in %)



The Disabled and Their Dependence on Cash Public Assistance Income

The high levels of joblessness among the state’s disabled population, especially among those adults with no high school diploma, would be expected to increase their reliance on some form of cash public assistance income to support themselves and their families, particularly when they would have been expected to be the primary breadwinner of the household. The 2005 ACS survey collected information on the sources of cash income of respondents during the twelve month period immediately prior to the survey. The survey questionnaire asked respondents to identify their receipt of Supplemental Security Income (SSI) for the disabled, welfare (TANF benefits) and other cash public assistance income, and Social Security disability and retirement income.³¹ We identified all disabled individuals who reported receiving any cash assistance income from the above three sources in the twelve month period prior to the ACS survey. Estimates of the share of the 16-60 year old disabled population who received some form of cash public assistance income during 2005 by educational attainment group are displayed in Table 17 for both Illinois and the U.S.

³¹ Individual retirees are not allowed to collect any Social Security retirement income until they are at least 62 years of age although survivors are allowed to collect survivors benefits at earlier ages. The bulk of the Social Security income reported by the disabled in our analysis should be disability income.

Table 17:
Percent of the 16-60 Year Old Disabled Population in Illinois and the U.S. Who Were Dependent
on Some Form of Cash Public Assistance Income by Educational Attainment, 2005
 (Excluding Individuals Enrolled in School)

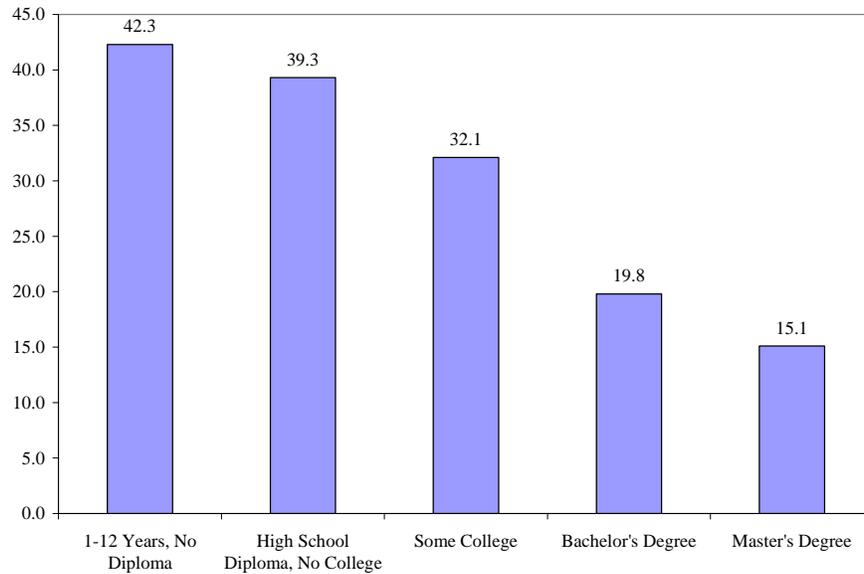
	(A)	(B)
Educational Attainment	Illinois (in %)	U.S. (in %)
1-12 Years, No Diploma or GED	49.3	50.4
High School Diploma, No College	43.0	43.3
Some College, including Associate	38.9	39.8
Bachelor's Degree	26.9	30.2
Master's Degree or higher	19.7	26.4

Source: 2005 American Community Survey (ACS), public use files, tabulations by authors.

The reliance of the adult disabled population in Illinois upon cash public assistance income to support themselves and their families varied considerably by educational attainment in 2005. Among the disabled lacking a high school diploma or GED, dependence on cash public assistance income was quite high. Slightly over 49% of the disabled in this educational attainment subgroup received some form of cash public assistance in 2005 versus 43% of high school graduates, 39% of those with 1-3 years of college, and only 27% of those with a Bachelor's degree. Clearly, disabled high school dropouts in Illinois and the U.S. were more of a fiscal burden to the state and national governments than their better educated peers. They also were more likely to receive Medicaid benefits, food stamps, rental subsidies, and other forms of in-kind assistance from national, state, and local governments. Findings for the U.S. in calendar year 2004 revealed that disabled adults who were not employed received \$20,000 more per year in cash and in-kind benefits from the federal and state government than they paid in payroll and federal/ state income taxes.³²

³² See: Andrew Sum, Ishwar Khatiwada, with Kamen Madjarov and Sheila Palma, Income Inadequacy Problems Among the Disabled Adult Population in Massachusetts, 2003-2004: Implications for Future State Antipoverty and Workforce Development Policy, Prepared for The Commonwealth Corporation and Massachusetts Rehabilitation Commission, July 2006.

Chart 14:
Percent of 16-60 Year Old Disabled Adults in Illinois Who Were Dependent on Some Form of
Cash Public Assistance Income by Educational Attainment, 2005 (in %)



The Degree of Overlap of Disability and Income Inadequacy Problems in Illinois and the U.S.

Given the high levels of joblessness among disabled adults with no high school diploma and their far more limited earnings when they are employed, one would expect a higher incidence of poverty/ near poverty problems among those disabled adults without high school diplomas. The near poor are those persons living in families with annual, pre-tax money incomes above the poverty threshold but less than 125 percent of the poverty threshold.³³ In Table 18, we have provided estimates of the number of disabled adults in Illinois and the U.S. who were poor/near poor in 2005 and the percent of all adults in each educational attainment subgroup who were both disabled and poor/near poor in that year.

In Illinois, during 2005, slightly more than 26% of all disabled adults were members of poor or near poor families. The incidence of such income inadequacy problems among the disabled varied quite considerably across educational attainment subgroups, ranging from a high of nearly 40 percent among high school dropouts to 26 percent among high school graduates and

³³ The poverty income thresholds are those of the federal government's Office of Management and Budget (OMB). The poverty lines vary by the number of persons in the household and their age distribution but are the same for all states, metropolitan areas, and cities.

to lows of 13 percent among Bachelor degree holders and only 8 percent among those with a Masters or higher degree. Very similar patterns prevailed among the disabled in the U.S.

Findings on the incidence of disability problems by educational attainment were combined with those of poor/ near poor problems to estimate the fraction of adults in each educational attainment group who were both disabled and living in families with incomes below 125% of the poverty line. High school dropouts in Illinois were twice as likely as high school graduates to be both disabled and face income inadequacy problems, and they were 10 times more likely to be in such a situation as their peers with a Bachelor's degree. Across the nation, high school dropouts had even higher combined rates of disability and poor/near poor problems. More than two out of five high school dropouts with a disability problem in the U.S. had an income below 125% of the federal poverty line. Those disabled adults lacking high school diplomas were much more likely than their better educated peers to report some form of disability and, when disabled, they were much more likely to be poor/ near poor. Problems of poverty/ near poverty and disability are closely intertwined in Illinois and the U.S., especially among less educated adults and older adults.

Table 18:
Overlap of Disability and Poor/Near Poor Problems Among 16-64 Year Olds by
Their Level of Educational Attainment, Illinois and the U.S., 2005

	(A)	(B)	(C)	(D)	(E)
Area/ Educational Attainment	Total Population	Disabled Population	Poor/Near Poor and Disabled	Percent of the Disabled Who Are Poor/Near Poor	Percent of the Population Who Were Both Disabled and PNP
Illinois					
1-12 Years of School, No Diploma	1,304,512	206,244	79,365	38.5	6.1
High School Diploma	2,140,493	262,043	69,218	26.4	3.2
Some College	2,452,024	224,616	49,808	22.2	2.0
Bachelor's Degree	1,448,352	63,996	8,529	13.3	0.6
Master's or Higher Degree	796,161	38,026	3,184	8.4	0.4
Total	8,141,542	794,925	210,104	26.4	2.6
United States					
1-12 Years of School, No Diploma	33,281,000	6,226,940	2,597,248	41.7	7.8
High School Diploma	53,288,450	7,694,979	2,209,109	28.7	4.1
Some College	54,819,605	6,137,927	1,460,107	23.8	2.7
Bachelor's Degree	31,091,964	1,811,433	252,504	13.9	0.8
Master's or Higher Degree	16,329,084	928,291	92,575	10.0	0.6
Total	188,810,103	22,799,570	6,611,543	29.0	3.5

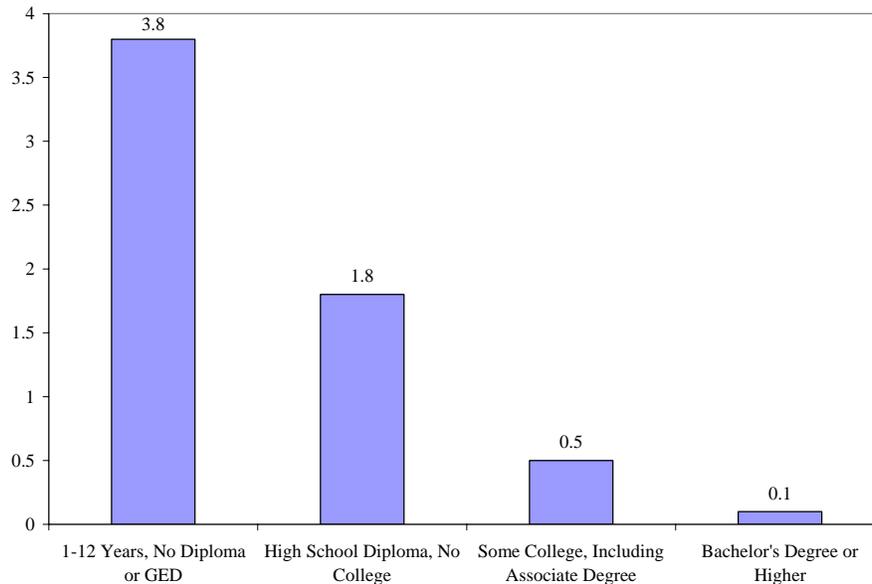
Source: 2005 American Community Surveys, public use files, tabulations by authors.

The Institutionalization Status of High School Dropouts in Illinois

An additional adverse social and economic consequence of being a high school dropout, especially among young males and Black males in particular, is a relatively high rate of incarceration in juvenile institutions, jails, and prisons. Nationally, institutionalization rates of young male adults vary considerably by educational attainment, with dropouts being the most prone to be in jail or prison (Chart 15). Young men with criminal convictions face severe difficulties in obtaining employment and will earn considerably less than their peers with no

criminal records, especially Black males.³⁴ The limited labor market prospects of ex-offenders place them at high risk of recidivism.

Chart 15:
Institutionalization Rates of 18-24 Year Olds by Level of
Educational Attainment in the U.S., 2000
(in %)



The Public Use Micro Sample (PUMS) data from the 2000 Census were used to estimate the number of 16-64 year olds by level of educational attainment who were institutionalized in juvenile homes, jails, prisons, mental hospitals, and nursing homes in Illinois at the time of the 2000 Census. The Census findings indicate that there were slightly more than 86,400 institutionalized persons (16-64) in Illinois in 2000. Of this total, 55,955 were high school dropouts, representing 65% of the state's institutionalized population.

³⁴For evidence on this issue,

See: (i) Richard Freeman, "Why Do So Many Young Americans Commit Crimes and What Might We Do About It?" *The Journal of Economic Perspectives*, Vol. 10, Winter 1996, pp. 25-42; (ii) Jeffrey Grogger, "The Effect of Arrests on the Employment and Earnings of Young Men," *Quarterly Journal of Economics*, Vol. 110, 1995, pp. 51-72; (iii) Harry J. Holzer, Steven Raphael, and Michael A. Stoll, "How Do Crime and Incarceration Affect the Employment Prospects of Less-Educated Young Black Men?" Center for the Study of Urban Poverty, University of California at Los Angeles, July 2002.

Table 19:
The Number and Percent of the 16-64 Year Old Institutionalized
Population by Level of Educational Attainment, Illinois, 2000

Educational Attainment	(A) Number of Institutionalized Persons	(B) Percent of Total Institutionalized
1-12 Years, No Diploma or GED	55,955	64.7
High School Diploma, No College	16,744	19.4
Some College, including Associate Degrees	11,737	13.6
Bachelor's Degree	1,316	1.5
Master's Degree	712	.8
Total	86,464	100.0

As was the case nationally, institutionalization rates among 16-64 year olds in Illinois varied substantially by educational attainment. Nearly 4% of all high school dropouts residing in Illinois at the time of the 2000 Census were institutionalized. This institutionalization rate was 4 times higher than that of high school graduates and 37 times higher than that of persons with a Bachelor's degree (Chart 16). Institutionalization rates are much higher for men than they are for women with men accounting for 86% of the total institutionalized population. In Chart 17, the institutionalization rates of 16-64 year old males by their level of educational attainment are displayed. Six out of every one hundred male high school dropouts in the state were institutionalized at the time of the 2000 Census versus only 1.5 percent of high school graduates, 1 percent of those persons with some college experience, and only one in every 1,000 individuals with a Bachelor's or higher degree. Male high school dropouts were 60 times more likely to be institutionalized than Bachelor degree holders.

Chart 16:
Percent of Illinois 16-64 Year Old Illinois Residents Who
Were Institutionalized by Educational Attainment, 2000

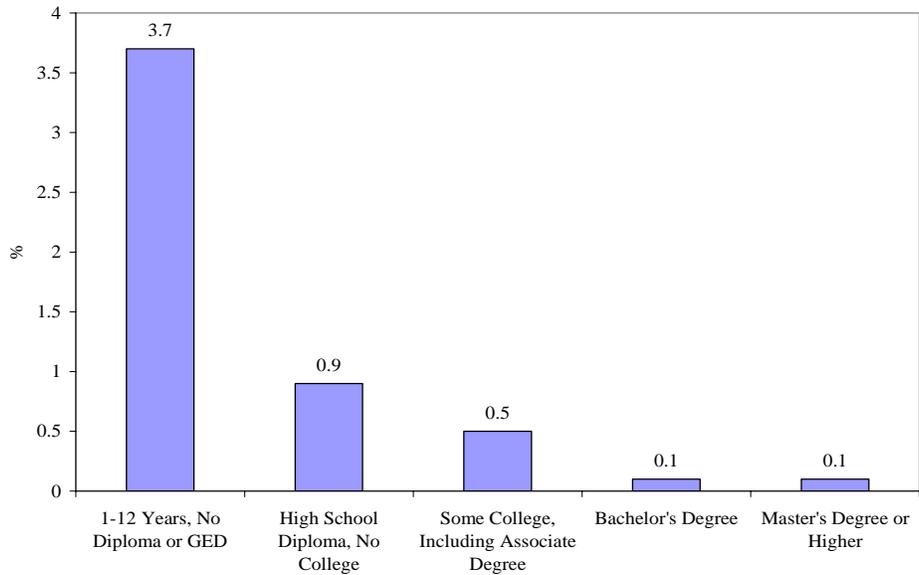
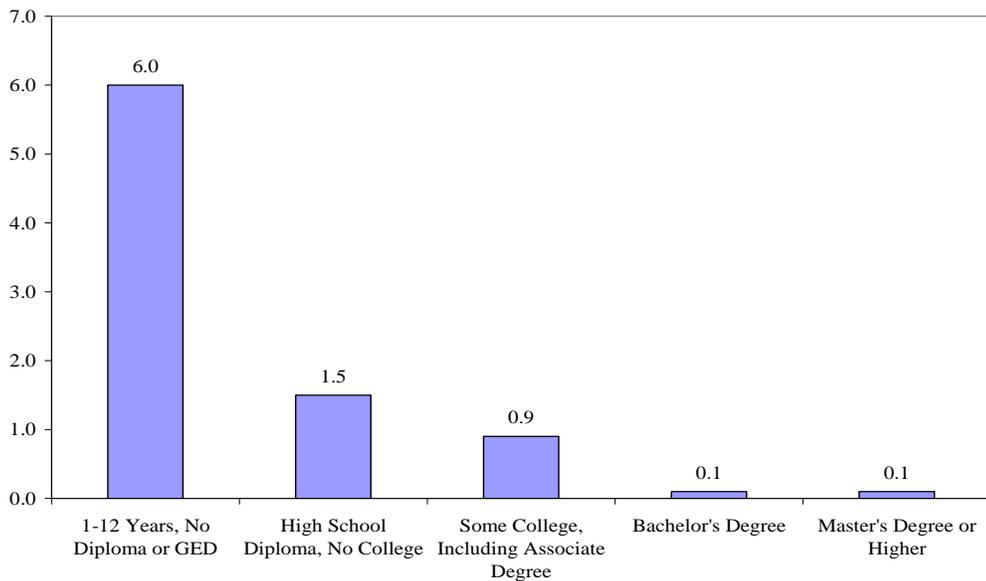


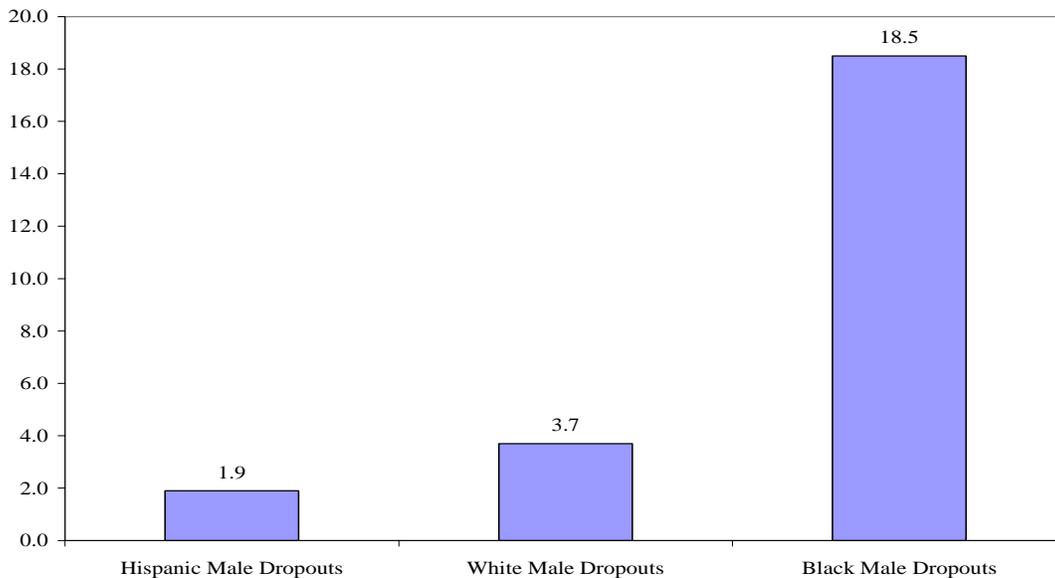
Chart 17:
Percent of Illinois 16-64 Year Old Males Who Were
Institutionalized by Educational Attainment, 2000



Institutionalization rates of male high school dropouts 16 to 64 years of age also varied considerably by race-ethnic group. In Chart 18, the institutionalization rates of male high school dropouts in Illinois by their race-ethnic group are presented. Approximately, 18 to 19 percent of

Black male high school dropouts in Illinois were institutionalized at the time of the 2000 Census. Their rate of imprisonment was five times higher than that of White male high school dropouts and nearly ten times higher than that of Hispanics (16-64).

Chart 18:
Institutionalization Rates of 16-64 Year Old Male
High School Dropouts by Race-Ethnic Group, Illinois, 2000 (in %)



The data on institutionalization rates can be combined with administrative data on the annual per capita cost of housing and supervising prison inmates to estimate the lifetime institutionalization costs associated with dropping out. According to the Illinois Department of Corrections, the annual per inmate cost of institutionalization in 2005 was \$21,622. By multiplying the institutionalization rate of each educational group times the per capita institutionalization cost, we can estimate the average annual costs of institutionalization for each educational attainment group. The average high school dropout costs the state of Illinois approximately \$1,297 in expenditures related to institutionalization per year. The annual costs of institutionalization of high school dropouts are 4 times as high as those of high school graduates without any postsecondary schooling and nearly 70 times higher than those of college graduates. The average annual costs can be summed over the lifetime of an individual to estimate the lifetime costs of institutionalization. By multiplying the average annual costs by 47 years, which is the number of years between 18 and 64 years of age, we can estimate the average lifetime cost of institutionalizing high school dropouts, high school graduates, and those in all other

educational subgroups. Column D in Table 20 displays the estimates of these lifetime costs by level of educational attainment. These estimated criminal justice system costs are conservative because they do not include either the costs of victimization or the costs associated with parole and probation.

Table 20:
Lifetime Per Capita Costs of Institutionalization for Males by
Educational Attainment, Illinois, 2005

	(A)	(B)	(C)	(D)
Educational Attainment	Institutionalization Rate (in %)	Per Capita Cost	Average Annual Cost (in \$)	Average Lifetime Cost of Institutionalization (in \$)
1-12 Years, No Diploma	6.0	21,622	1,297	60,959
High School Diploma, No College	1.5	21,622	324	15,228
Some College, Including Associate	0.9	21,622	195	
Bachelor's Degree	0.1	21,622	22	916
Master's Degree	0.1	21,622	22	916

Receipt of Cash Public Assistance Among Illinois Adults by Level of Educational Attainment in 2005

The limited annual earnings of adult high school dropouts in Illinois and their much higher rates of year-round joblessness can be expected to increase their reliance on various forms of cash public assistance incomes to support themselves. In this section, we will estimate the share of 16-60 year old high school dropouts in the state of Illinois that received one of the following three sources of cash public assistance: Supplemental Security Income (SSI), welfare (TANF benefits) and other cash public assistance income, and Social Security disability and retirement income.³⁵ Estimates of the share of the 16-60 year old population who received some form of cash public assistance income during 2005 by educational attainment group are displayed in Table 21 for both Illinois and the U.S.

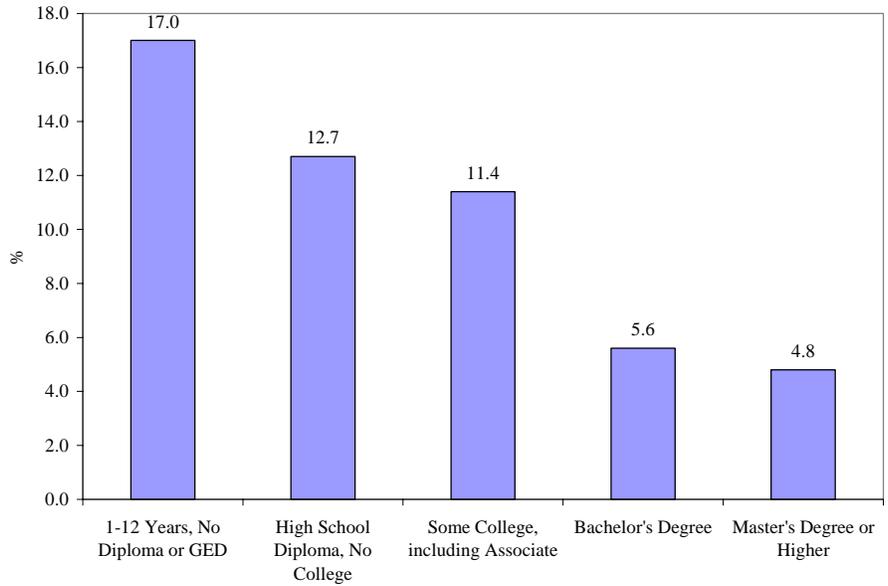
³⁵ Individual retirees are not allowed to collect any Social Security retirement income until they are at least 62 years of age although survivors are allowed to collect at earlier ages. The bulk of the Social Security income reported by the disabled in our analysis should be disability income.

The likelihood that an adult in Illinois received some type of cash public assistance income in 2004 varied systematically by their years of schooling completed. Approximately 17 of every 100 adults lacking a high school diploma or a GED certificate were recipients of some type of cash public assistance income versus 13 percent of high school graduates, 11 percent of those adults with one to three years of college, and only 5 percent of adults with a bachelor's or higher degree (Chart 19). Very similar patterns prevailed in the U.S. where nearly 19 of every 100 adults without a diploma were dependent on some form of cash public assistance income versus only 5 to 6 percent of similar-aged adults with a Bachelor's or higher degree.

Table 21:
Percent of the 16-60 Year Old Population in Illinois and the U.S.
Who Were Dependent on Some Form of Cash Public Assistance Income by
Educational Attainment, 2005

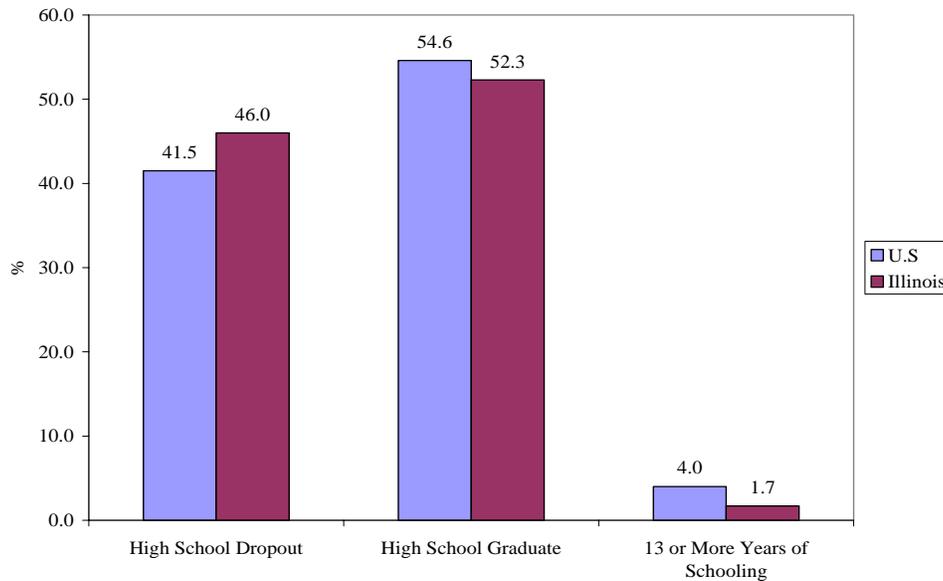
	(A)	(B)
Educational Attainment	Illinois	U.S.
1-12 Years, No Diploma or GED	17.0	19.0
High School Diploma, No College	12.7	13.9
Some College, including Associate	11.4	12.5
Bachelor's Degree	5.6	6.4
Master's Degree	4.8	5.1

Chart 19:
Percent of the 16-60 Year Old Population in Illinois Who Were
Dependent on Some Form of Cash Public Assistance Income by Educational Attainment, 2005



In addition to analyzing the ACS public use data files on public assistance income receipts, we obtained administrative data on the educational characteristics of recipients of benefits under the Temporary Assistance for Needy Families (TANF) program in both Illinois and the U.S. The administrative data base for the national TANF program shows that a substantial share of the TANF caseload in Illinois lacked a high school diploma (Chart 20). Of all the adults in Illinois receiving TANF benefits, nearly one-half (46%) did not complete high school, a higher share than the national average (41.5%).

Chart 20:
Percent Distribution of Adult TANF Recipients by Level of Educational Attainment, October 2003-September 2004



Source: U.S. Department of Health and Human Services, Administration for Children and Families

The administrative data on the educational characteristics of TANF recipients can be combined with ACS data on the educational characteristics of 18-44 year old women in Illinois (the primary recipients of TANF benefits) to estimate the relative incidence of TANF benefit receipt among educational subgroups of adult women in the state in recent years. Those adult women lacking a high school diploma represented only 11% of the female 18-44 year old population in Illinois yet they accounted for 46% of all TANF recipients. Thus, they were over-represented in the ranks of the TANF population by a multiple of four to one. High school graduates accounted for 24.5% of 18-44 year old women in the state but they represented 52% of TANF recipients. Thus, they were over-represented in the ranks of the TANF beneficiary pool by a multiple of two to one. In sharp contrast, adult women (18-44 years old) with one or more years of post-secondary schooling accounted for only 1.7% of TANF recipients in Illinois during the 2004 fiscal year even though they represented nearly 65% of the adult female population in that age group during 2005. Thus, women with one or more years of post-secondary schooling were substantially under-represented in the ranks of TANF recipients. A female high school dropout in Illinois was 140 times more likely than her peers with some post-secondary schooling to be dependent on the TANF program for her economic subsistence in 2004.

Table 22:
The Educational Distribution of TANF Recipients and the 18-44 Year Old Female Population in Illinois During 2004

	(A)	(B)	(C)
	Percent of Female Population 18- 44	Percent of TANF Recipients	Relative Incidence of TANF Beneficiaries (Col. B/ Col. A)
1-12 Years, No Diploma	11.0	46.0	4.18
High School Diploma, No College	24.5	52.3	2.13
13 or More Years of Schooling	64.5	1.7	0.03

Fiscal Consequences of Dropping Out of High School

Given the lower average annual earnings of employed high school dropouts and their much higher rates of year-round joblessness, they can be expected to pay considerably fewer dollars in Social Security payroll taxes and state/federal income taxes than their better-educated peers in both the state and the nation. High school dropouts also impose higher fiscal burdens on state and federal governments than persons with high school diplomas because they are more likely to depend on government for cash and non-cash transfer incomes, such as food stamps and rental subsidies, to support themselves. To quantify the size of these tax payments to the state and federal government and the value of the cash and in-kind transfers that they received, we analyzed data from the March 2005 Current Population Survey Supplement from the U.S. Census Bureau. The March CPS household survey contains a work experience and income supplement that collects a wide array of data from households on their income sources during the previous years as well as their receipt of a wide array of in-kind benefits, including food stamps, rental subsidies, energy assistance and Medicaid/Medicare benefits.³⁶

The Census Bureau imputes estimates of the likely amount of Social Security payroll, state income, and federal income taxes paid by each working-age individual based on their annual incomes, marital status, and family living arrangements. We have analyzed the estimated

³⁶ Information on the design of the March CPS supplement questionnaire can be found on the U.S. Census Bureau web site. See: “2005 Annual Social and Economic Supplement (ASEC).”

tax payments, cash transfer incomes (including federal and state earned income tax credits), and in-kind benefits to calculate the net fiscal impact of each adult 16-64 years old in Illinois and the U.S. by their educational attainment level during calendar year 2004. Table 23 displays a listing of the tax items, cash transfers, and non-cash transfers included in our fiscal cost-benefit analysis for government. The fiscal analysis was undertaken for all 16-64 years old adults and for men and women separately.

For five educational groups of these 16-64 year olds, we have estimated the value of the combined income and payroll taxes that they paid during the calendar year and the value of the cash and in-kind transfers that they received.³⁷ The net fiscal benefits to the federal and state government are equal to the difference between the annual taxes paid by an individual and the value of the cash and in-kind transfers that he/she received during calendar year 2004.

Table 23:
A Listing of the Cash Transfer, Non-Cash Transfer, and
Tax Items Used in Conducting the Fiscal Impact Analysis

Total Costs to Government		Total Benefits to Government
Cash Transfers	Non-Cash Transfers	Tax Income
Unemployment benefits	Earned Income Tax Credits	Federal income tax liability
Worker's compensation	Market value of food stamps	State income tax liability
Social Security payments	Market value of Medicare insurance	Federal retirement payroll deduction
Supplemental Social Income for the disabled and aged	Market value of Medicaid benefits	Social Security retirement payroll
Public assistance income	Family market value of housing subsidies	
Veteran's payments	Family value of school lunch subsidies	
Survivor's income benefits	Energy assistance payments	
Other disability income		

How much do adults with different levels of schooling pay on average to the government in the form of Social Security, state and federal income taxes and how much do they receive in the form of both cash and non-cash transfer incomes? Table 24 provides estimates of these

³⁷ Food stamps, rental subsidies, and energy assistance are received by the household rather than by an individual unless he/she is living alone. For each adult, we assigned him/her the value of the benefits received by the household in which they lived.

values for non-enrolled 16-64 year old adults in Illinois and the U.S. These estimates are annual averages for the calendar year 2004.

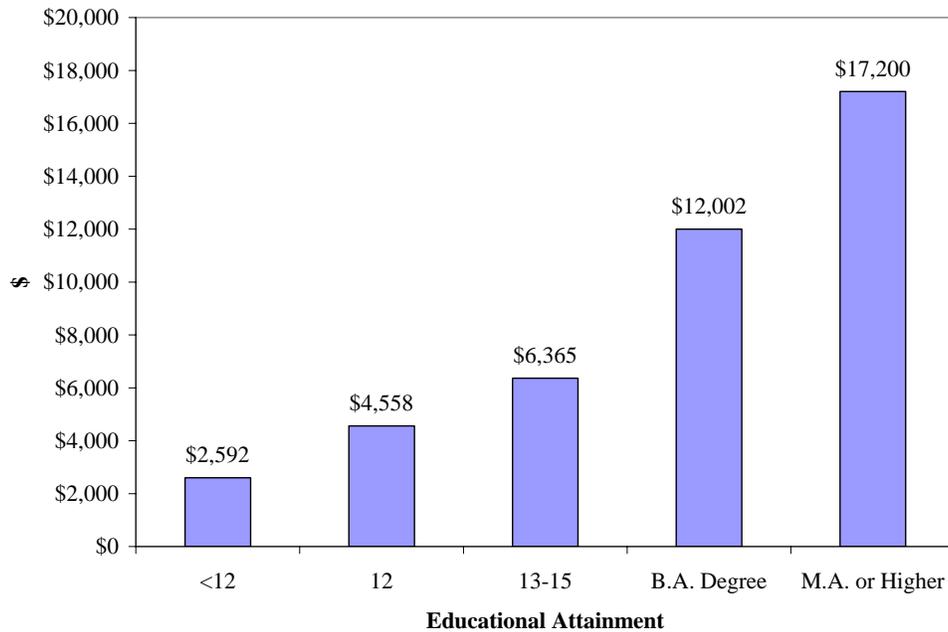
In both Illinois and the U.S., the mean amount of taxes paid to the government by non-enrolled 16-64 year olds varied quite widely by their level of educational attainment. In Illinois, persons without a high school diploma or a GED certificate paid only an average of \$2,592 in taxes to the government whereas high school graduates paid \$4,558, Bachelor degree holders paid \$12,002 and persons with a Master's or more advanced degree paid \$17,200. (Table 24 and Chart 21). On the other side of the ledger, the mean dollar value of the cash and non-cash transfers received by less educated persons was higher in comparison to that of their more educated peers. In Illinois, the estimated annual average cost to the state and federal government from the payment of cash and non-cash transfers was highest for adults lacking high school diplomas and lowest for the best educated persons. The mean annual size of these costs ranged from highs of \$3,867 for a person without a high school diploma and \$2,867 for those persons with a high school diploma/GED to lows of \$900-\$1,300 for Bachelor and Master degree holders. (Chart 22).

Given the data on mean tax payments and cash/in-kind transfers, we calculate the mean net fiscal benefits for each educational subgroup. Overall, the net fiscal benefits (mean taxes paid-mean transfer incomes) accruing to state and national governments ranged from -\$1,328 for persons without a high school diploma to +\$1,692 for high school graduates, +\$4,397 for persons with some college, +\$11,066 for Bachelor degree holders and +\$15,933 for those with a Master's or higher degree. (Chart 23). The annual value of these net fiscal benefits for men in each educational category was higher than that of their female counterparts. Similar patterns prevailed in the U.S. (Table 24).

Another way of representing the fiscal impacts for each educational subgroup is to calculate the ratio of taxes paid to transfers received. Chart 24 displays the ratio of tax payments to cash and in-kind benefits for 16-64 year old in each of the five educational attainment categories in Illinois. Those adults lacking a high school diploma paid only 67 cents in payroll and income taxes for every dollar they received in cash and in-kind transfers. The ratio for all other educational subgroup was above 1 and rose sharply with higher educational attainment. High school graduates with no post-secondary schooling paid \$1.59 in taxes for every dollar of transfers that they received. This ratio of taxes to transfers rose to 3.23 for those with 1-3 years

of college and to 12.82 or higher for those with a Bachelor’s or advanced degree. Clearly, high school dropouts in Illinois impose major fiscal burdens on the rest of the society. Since the value of the government services they received are excluded from the denominator. These fiscal impacts also exclude the higher costs of incarceration and institutionalization associated with male dropouts and the real value of the subsidies associated with providing medical care to less educated adults.³⁸ Strengthening the educational attainment of less educated adults in Illinois could help improve the fiscal position of the state and national governments.

Chart 21:
Mean Annual Payroll and Federal/State Income Taxes Paid by
Non-Enrolled 16-64 Year Old Adults in Illinois by Educational Attainment, 2004



³⁸ The cost of Medicaid benefits represents the fungible value of the insurance benefits provided not the actual costs of providing healthcare to Medicaid recipients. The actual outlays substantially exceed the estimated fungible value of the benefits.

Chart 22:
Mean Annual Value of Cash and In-Kind Transfers Received by
Non-Enrolled 16-64 Year Old Adults in Illinois by Educational Attainment, 2004

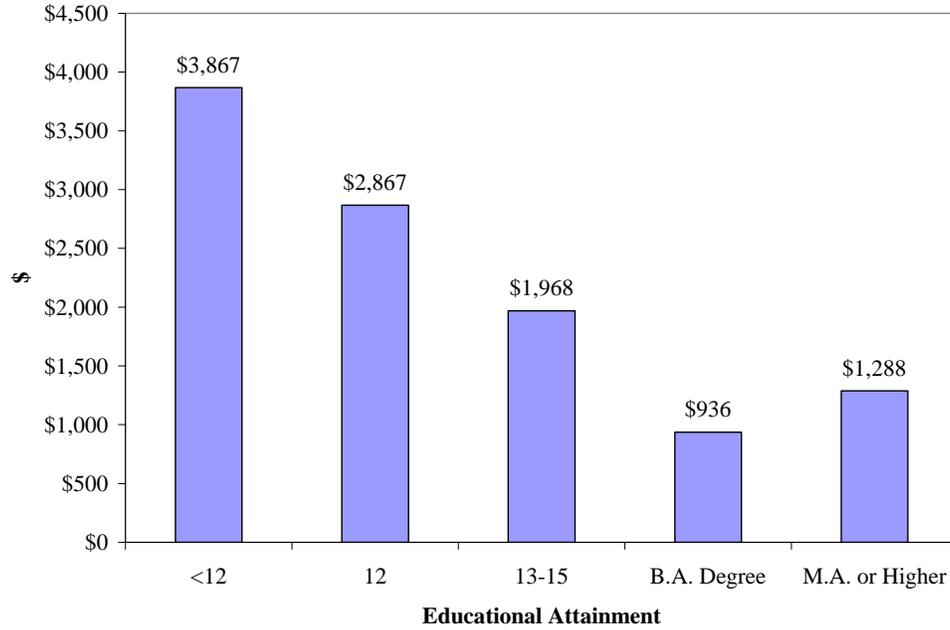


Chart 23:
Mean Taxes Paid- Transfers Received by Non-Enrolled
16-64 Year Old Adults in Illinois by Educational Attainment, 2004

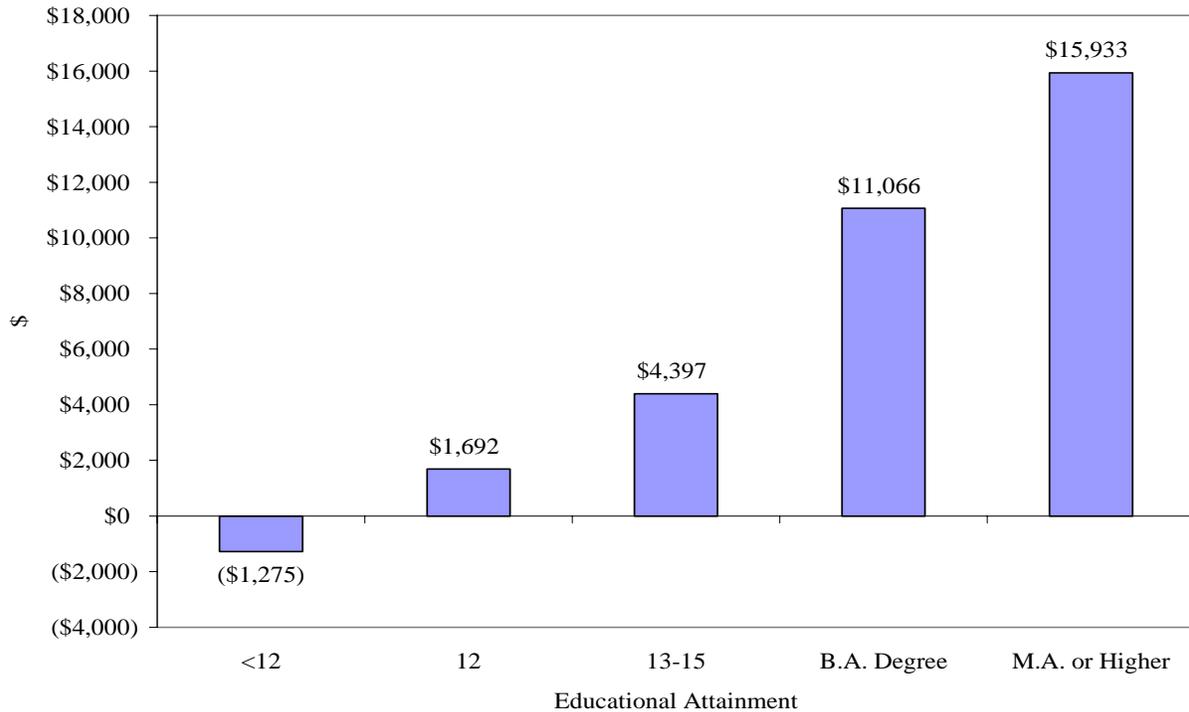


Table 24:
Estimates of Annual Average Tax Payments, Cash Transfers and
Non-Cash Transfers of Non-Enrolled 16-64 Year Old Men and Women in
Illinois and the U.S., Total and by Their Educational Attainment Level, 2004

		(A)	(B)	(C)	Total	Taxes Paid-
	Educational Attainment	Taxes	Cash	In-Kind	Transfers	Transfers
Illinois		Paid	Transfers	Benefits	(B+ C)	(B+C)- A
Male	<12 or 12, No HS Diploma	\$3,956	\$1,605	\$1,594	\$3,199	\$757
	HS Graduate or GED	\$5,637	\$1,800	\$1,196	\$2,996	\$2,641
	1-3 Years of College	\$8,148	\$1,285	\$824	\$2,109	\$6,039
	Bachelor's Degree	\$14,211	\$449	\$161	\$610	\$13,601
	Master's or Higher	\$20,985	\$1,367	\$460	\$1,827	\$19,159
	Total	\$9,354	\$1,342	\$869	\$2,211	\$7,143
Female	<12 or 12, No HS Diploma	\$1,170	\$1,637	\$2,926	\$4,563	-\$3,393
	HS Graduate or GED	\$3,297	\$1,531	\$1,185	\$2,716	\$581
	1-3 Years of College	\$4,825	\$1,107	\$740	\$1,846	\$2,978
	Bachelor's Degree	\$9,938	\$921	\$320	\$1,241	\$8,697
	Master's or Higher	\$13,105	\$603	\$59	\$662	\$12,443
	Total	\$5,857	\$1,198	\$952	\$2,150	\$3,707
All	<12 or 12, No HS Diploma	\$2,592	\$1,621	\$2,246	\$3,867	-\$1,275
	HS Graduate or GED	\$4,558	\$1,676	\$1,191	\$2,867	\$1,692
	1-3 Years of College	\$6,365	\$1,189	\$779	\$1,968	\$4,397
	Bachelor's Degree	\$12,002	\$693	\$243	\$936	\$11,066
	Master's or Higher	\$17,200	\$1,000	\$267	\$1,267	\$15,933
	Total	\$7,612	\$1,270	\$910	\$2,181	\$5,431
United States						
Male	<12 or 12, No HS Diploma	\$2,912	\$1,989	\$2,252	\$4,241	-\$1,328
	HS Graduate or GED	\$5,977	\$1,601	\$1,164	\$2,765	\$3,212
	1-3 Years of College	\$8,803	\$1,471	\$689	\$2,160	\$6,643
	Bachelor's Degree	\$14,839	\$925	\$292	\$1,217	\$13,622
	Master's or Higher	\$23,745	\$1,063	\$251	\$1,315	\$22,430
	Total	\$9,523	\$1,451	\$959	\$2,410	\$7,113
Female	<12 or 12, No HS Diploma	\$1,394	\$2,111	\$3,362	\$5,474	-\$4,080
	HS Graduate or GED	\$3,458	\$1,468	\$1,499	\$2,966	\$492
	1-3 Years of College	\$5,381	\$1,292	\$999	\$2,291	\$3,090
	Bachelor's Degree	\$9,298	\$778	\$418	\$1,195	\$8,103
	Master's or Higher	\$13,679	\$710	\$249	\$959	\$12,719
	Total	\$5,777	\$1,298	\$1,269	\$2,567	\$3,210
All	<12 or 12, No HS Diploma	\$2,198	\$2,047	\$2,774	\$4,821	-\$2,623
	HS Graduate or GED	\$4,751	\$1,536	\$1,327	\$2,863	\$1,888
	1-3 Years of College	\$6,951	\$1,374	\$857	\$2,231	\$4,720
	Bachelor's Degree	\$11,939	\$848	\$358	\$1,206	\$10,734
	Master's or Higher	\$18,849	\$892	\$250	\$1,142	\$17,707
	Total	\$7,628	\$1,374	\$1,116	\$2,490	\$5,139

Source: March 2005 CPS Work Experience and Income Supplements, U.S. Census Bureau, tabulations by authors.

Chart 24:
Ratios of Mean Annual Taxes Paid to Transfers Received by
Non-Enrolled 16-64 Year Old Adults in Illinois by Educational Attainment, 2004

