

The Lifetime Employment, Earnings and Poverty Consequences of Dropping Out of High School in the Los Angeles Metro Area

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Introduction

Over the past half dozen years, a number of observers within the Los Angeles schools system have voiced concern about what they perceive as a dropout crisis in the city's school system. Part of this concern has been fueled by several important studies that examine the size and characteristics of the city's high school dropout population and provide insights into early identification of students most likely to leave school.¹ Los Angeles Mayor Antonio Villaraigosa has described the city's dropout figures as "*numbers that should put a chill in your spine*" and has made a reduction in the city's high school dropout rate a top priority for his administration.²

Estimates of the number and rate of dropouts in the city of Los Angeles, as well as in the state of California as a whole, have varied considerably depending on the data used and the measure employed to produce these estimates. For example, in the spring of 2005 the Civil Rights Project at Harvard University (in conjunction with UCLA) produced a controversial report which claimed that only 45 percent of the students who started ninth grade in the Los Angeles Unified School District in 1999 graduated four years later (calculated utilizing the Cumulative Promotion Index methodology developed by Christopher Swanson of the Editorial Projects in Education); thus yielding a dropout rate of over 50 percent.³ Meanwhile, the Education Trust-West advocacy organization reported in 2005 that only 22 percent of all the 9th graders in the Los Angeles Unified School District graduate four years later having successfully completing the curriculum; yielding a dropout rate of 78 percent.⁴ In contrast, district and state officials estimate a significantly lower dropout rate: using 2004-2005 figures, and a narrower

¹ Russell W. Rumberger and Sun Ah Lim. October 2008. *Why Students Drop Out of School: A Review of 25 Years of Research*. California Dropout Research Project Report #15; Russell W. Rumberger and Brenda Arellano. December 2007. *Student and School Predictors of High School Graduation in California*. California Dropout Research Project Report #5; David Silver, Marisa Saunders, and Estela Zarate. June 2008. *What Factors Predict High School Graduation in the Los Angeles Unified School District*. California Dropout Research Project Report #14.

² Shannon Holmes. March 20th 2006. *Los Angeles Mayor Villaraigosa Calls High School Dropout Rate the New Civil Rights Issue*. The United States Conference of Mayors.

³ March 2005. *Confronting the Graduation Rate Crisis in California*. The Civil Rights Project, Harvard University <http://www.civilrightsproject.ucla.edu/research/dropouts/dropouts05.php>

⁴ (1) The Education Trust-West is the West Coast partner of the national advocacy organization, The Education Trust. Their basic tenet is to ensure that all students in California, particularly low-income students and students of color, receive the same opportunities for high academic achievement as other students across the state.

(2) 2005. *Preparing LAUSD High School Students for the 21st Century Economy: We have the way, but do we have the will?* The Education Trust-West.

definition of what constitutes a dropout, they estimate that about 24 percent of Los Angeles Unified students drop out of high school.⁵

However, over the past couple of years a systematic effort has been organized within California to develop a consistent way to define and measure high school dropouts. This effort has contributed to the establishment of the California Longitudinal Pupil Achievement Data System (CALPADS) and Statewide Student Identifiers (SSIDs).⁶ Each K-12 student in a California public school is now entered into the SSID system and assigned an individual, yet non-personally identifiable, number that is maintained throughout the student's academic career (SSIDs were assigned to all K-12 public school students by June 2005). SSIDs allow for a more accurate tracking of how many students are, or are not, completing their education in California: it increases the accountability for school districts to find students who stop coming to school; it helps school districts identify students who were considered a dropout at a school they left, but in fact were enrolled in a different district; and it allows the state's department of education to identify students reported by a school district as transferring to another California school district but cannot be found subsequently enrolled. SSIDs will eventually be tracked through CALPADS, which will maintain longitudinal, individual student-level data including student demographics, program participation, grade level, enrollment, course enrollment and completion, discipline, state assessment, teacher assignment, and other data required to meet state and federal reporting requirements. CALPADS is scheduled to be fully implemented with all districts in the 2009-10 school year and once successfully done will offer a valuable opportunity to improve dropout documentation and measurement through a more transparent and less complicated process.⁷

Until student-identifier data are collected over four years, the California Department of Education will still be reporting an estimated four-year graduation rate and a derived four-year

⁵ Joel Rubuin. June 21st 2006. *Mayor Cites Dropout Data to Push Plan*. Los Angeles Times

⁶ *Longitudinal Education Data Systems*. California Department of Education.
<http://www.cde.ca.gov/ds/td/lo/index.asp>

⁷ September 25th 2008. *State Schools Chief Jack O'Connell Releases Revised Dropout and Graduation Rates Using Individual Student-Level Data*. California Department of Education News Release.

dropout rate.⁸ The derived dropout rate for the Los Angeles Unified School District was calculated as 26.4 percent for the 2007-2008 school year.⁹

While these estimates by the California Department of Education report a considerably lower high school dropout rate in the Los Angeles Unified School District than the number suggested by many other studies, even this more optimistic estimate still points to a dropout crisis: these numbers still reveal that more than a quarter of high school students in the Los Angeles Unified School District do not graduate. Far too many youth in Los Angeles continue to quit school without earning a diploma. This is a deeply worrying outcome because dropping out of high school has several serious consequences that are borne by the individual who has dropped out, as well as by the community in which he or she resides. This paper focuses on three such consequences for high school dropouts: their low employment levels, their low earnings, and their increased risk of falling into poverty for a prolonged period of time. High school dropouts are considerably less likely to be employed than are their better-educated counterparts. Furthermore, when they do find employment, high school dropouts are more likely to work in low skilled jobs that pay low wages. Over their entire working lifetime, these employment and earnings disadvantages accumulate into large annual and lifetime employment and earnings deficits compared to their better-educated counterparts, resulting in an increase in their risk of living in poverty for a long period of time.

Data Sources and Methods

This paper presents estimates of the lifetime employment, earnings and poverty impacts of dropping out of high school for residents of the Los Angeles metro area. These estimates are based on the authors' analysis of the U.S. Bureau of the Census's American Community Survey (ACS) public use data files for the years 2005, 2006 and 2007. The ACS is a large-scale population survey designed to produce accurate estimates of a wide variety of population characteristics at the national, state and selected local levels on an annual basis. The ACS surveys in the Los Angeles metro area from 2005, 2006 and 2007 were completed by more than

⁸ *Ibid.*

⁹ The 4-year derived dropout rate is an estimate of the percent of students who would drop out in a four year period based on data collected for a single year. It is derived using the following formula: $(1 - ((1 - (\text{Reported or Adjusted Gr. 9 Dropouts} / \text{Gr. 9 Enrollment})) * (1 - (\text{Reported or Adjusted Gr. 10 Dropouts} / \text{Gr. 10 Enrollment})) * (1 - (\text{Reported or Adjusted Gr. 11 Dropouts} / \text{Gr. 11 Enrollment})) * (1 - (\text{Reported or Adjusted Gr. 12 Dropouts} / \text{Gr. 12 Enrollment})))) * 100$

See: *Data Quest*. California Department of Education.

125,000 responding households.¹⁰ Respondents to the ACS completed a detailed questionnaire about the demographic, social, and economic characteristics of household members including information on their educational attainment, current school enrollment status, and labor market activities in the last year, as well as income and earnings experiences of each person residing in the household. High school dropouts in this study are defined as those persons aged 18 to 64 years who failed to earn either a regular high school diploma or a similar type of equivalency award such as a GED and who were not currently enrolled in school.¹¹

The population group we have included in our analysis includes the cross section of the resident Los Angeles metro population aged 18 to 64 years (non elderly adults) who lived in households, excluding those persons aged 18 to 22 who reported that they were enrolled in high school or college at the time of the ACS survey. This age-school enrollment group includes persons who are most likely to be employed or actively seeking employment. The primary activities of persons under age 18 and the elderly (65+) as well as those aged 18 to 22 who are enrolled in school, are typically not job market related and are therefore excluded from our analysis.

Work Activities of Los Angeles Metro Area Non-Elderly Adults by Educational Attainment

Work Rates

Access to employment is a fundamental determinant of the degree of an individual's success in the labor market. Access to employment is closely associated with the level of educational attainment. Better-educated individuals are more likely to be employed than their less-educated counterparts. Indeed, our analysis of the 2005 to 2007 ACS data reveals that in the Los Angeles metro area a strong relationship exists between access to work and levels of educational attainment. The findings in Chart 1 examine the mean incidence of work among the adult population in the Los Angeles metro area over a 12-month period. The incidence of work is

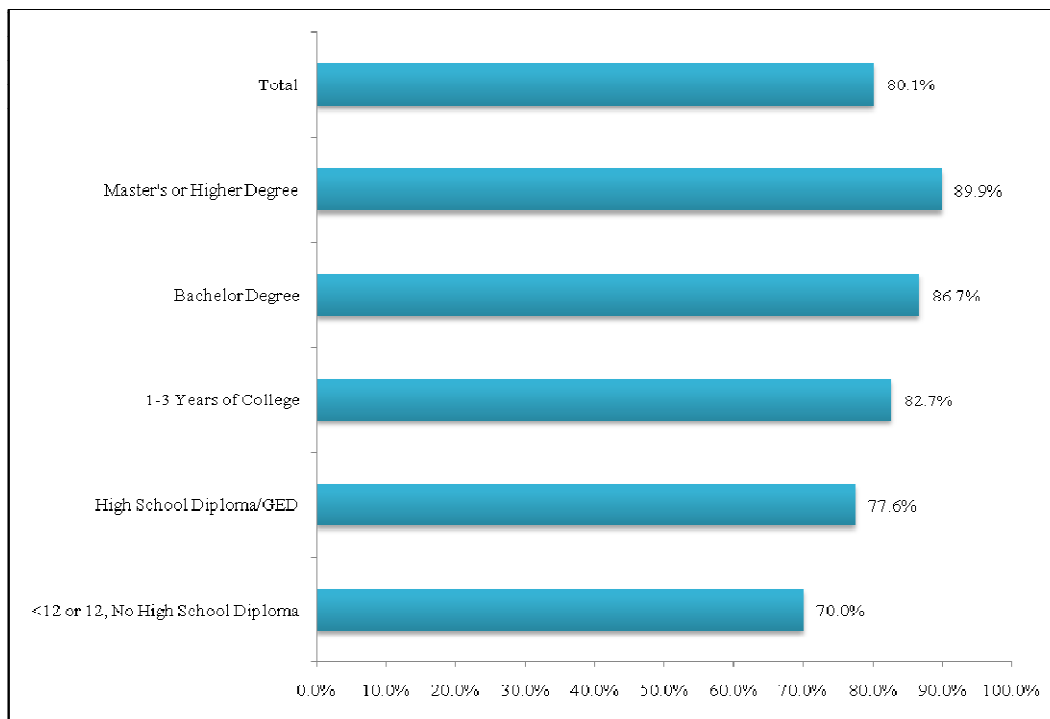
¹⁰ Our definition of the Los Angeles Metro Area includes Los Angeles, Long Beach and Santa Ana.

¹¹ Respondents to the ACS survey were asked to identify whether they were enrolled in school at any time in the three 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. GED holders are assigned to the high school graduate category if they did not complete any years of post-secondary schooling.

a measure of the number of persons in a given population group who reported that they were employed at least one week during the prior 12 months.¹²

In the Los Angeles metro area the likelihood that a resident worked over the previous 12 months rose considerably by educational attainment. At the master's degree and higher level, the data reveal that about 9 out of 10 residents in the metro area reported that they had worked in the prior year. Similarly, among those with a bachelor's degree, 87 percent of the residents of the Los Angeles metro area reported that they had worked in the prior year. Meanwhile, more than 8 out of 10 Los Angeles metro area residents who had finished high school and had some college education below the bachelor's degree level reported some work activity in the previous 12 months (83 percent).

Chart 1: The Mean Annual Incidence of Work of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment, 2005-2007 (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

¹² The employment measures includes all individuals who worked for pay or profit or individuals who worked without pay in a family business or farm for 15 hours or more per week at any time during the 12 months preceding the ACS survey.

However, among high school graduates residents with no college education, work rates are noticeably lower compared to their counterparts who have some post-secondary schooling. The mean work rate of residents of the Los Angeles metro area who earned a high school diploma, but did not go to college, falls to about 78 percent. This mean annual work rate of residents with only a high school diploma is equal to 94 percent of the equivalent rate of those with college below the bachelor's degree, to 90 percent of the work rate of those who have a bachelor's degree, and to 86 percent of that of residents who have a master's degree or higher.

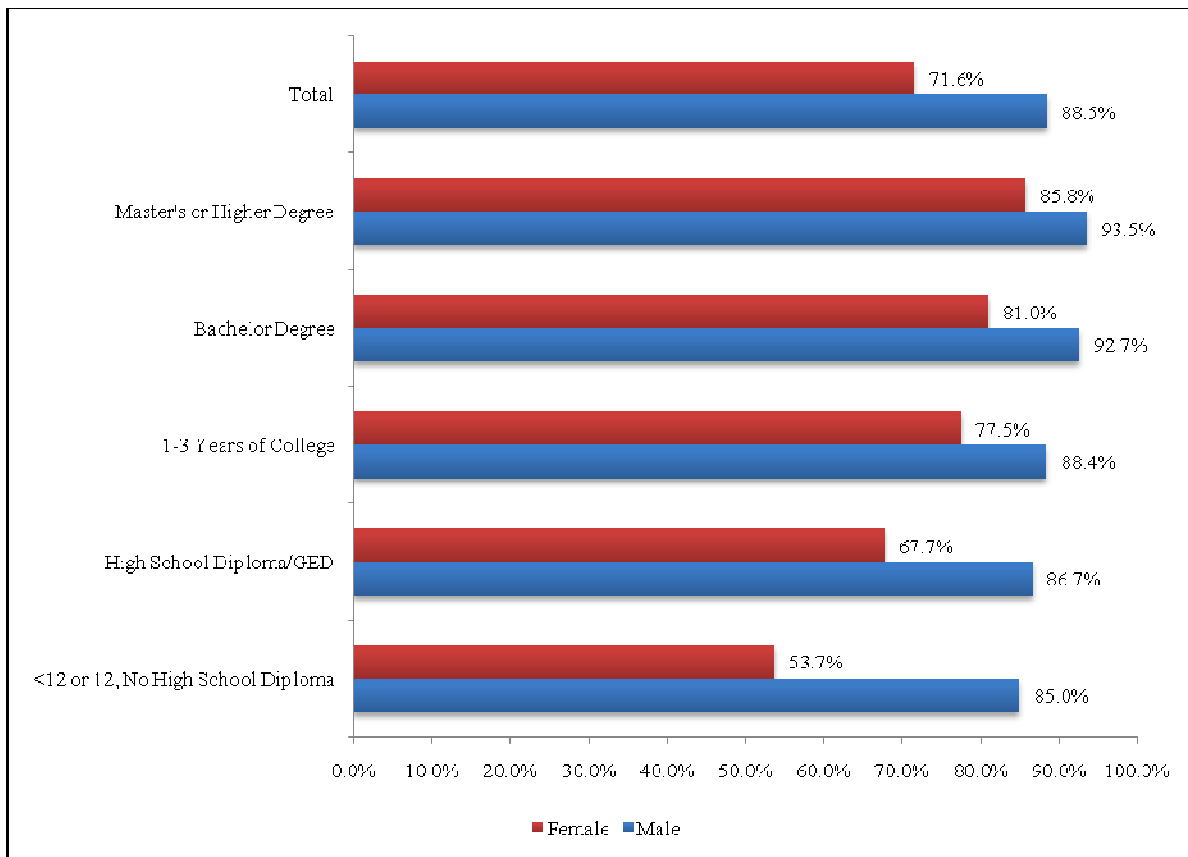
High school dropouts had the lowest mean annual work rate among the population of adults aged 18 to 64 in the Los Angeles metro area. Only 7 out of 10 high school dropouts in the Los Angeles metro area reported some work activity during an entire year. Thus, almost a third of the adult high school dropout population in the Los Angeles metro area did not report any work activity in the previous 12 months; 34 percent higher than the share of adult residents who only had a high school diploma and between 2 and 3 times as large as the equivalent share found among those residents who had a college degree of some type.

Gender Differences in Work Rates

The probability that an adult will work is positively associated with the levels of educational attainment for both men and women. However, differences in mean annual work rates exist between men and women, even within the same educational attainment levels. The data in Chart 2 and Table 1 reveal that within the Los Angeles metro area women are significantly less likely to work than are their male counterparts at every level of educational attainment. The size of this gap is especially large for high school dropouts.

The overall mean annual work rate for males aged 18 to 64 in the Los Angeles metro area was 89 percent compared to 72 percent for females: a difference of 17 percentage points. Among persons with a master's degree, the mean annual work rate of men is about 8 percentage points higher than that of their female counterparts (94 percent versus 86 percent, respectively). Meanwhile, among those with a bachelor's degree the mean annual work rate gap between men and women was almost 12 percentage points (93 percent versus 81 percent, respectively), while among those with some college, but without a bachelor's degree, it was around 10 percentage points (88 percent versus 78 percent, respectively).

Chart 2: The Mean Annual Incidence of Work of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Table 1: Absolute and Relative Differences between Males and Females (18 to 64 year Old Civilian, Non-Institutional) in the Mean Annual Incidence of Work in the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)

Educational Attainment	Male	Female	Absolute Difference	Relative Difference
<12 or 12, No High School Diploma	85.0%	53.7%	-31.3%	-37%
High School Diploma/GED	86.7%	67.7%	-18.9%	-22%
1-3 Years of College	88.4%	77.5%	-10.9%	-12%
Bachelor Degree	92.7%	81.0%	-11.7%	-13%
Master's or Higher Degree	93.5%	85.8%	-7.7%	-8%
Total	88.5%	71.6%	-16.9%	-19%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

The gender gap in mean annual work rates is even greater among residents of the Los Angeles metro area who are high school graduates with no college education, compared to their counterparts who have some post-secondary schooling. Men who earned a high school diploma or its equivalency, but did not attend college, had an overall mean annual work rate of 87 percent while their female counterparts had an overall work rate of 68 percent: a difference of 19 percentage points.

However, the gender gap in mean annual work rates is greatest among high school dropouts. Men in the Los Angeles metro area who had failed to earn a high school diploma or its equivalency had a mean annual work rate of 85 percent. In contrast, just over half of the adult women in the Los Angeles metro area who had dropped out of high school reported that they had worked in the past 12 months (a mean annual work rate of just 54 percent). This yields an absolute difference of 31 percentage points and a relative difference in work rates of 37 percent between male and female high school dropouts. This gender gap in the work rates of adult high school dropouts living in the Los Angeles metro area reflects a similar divide found in the nation.¹³

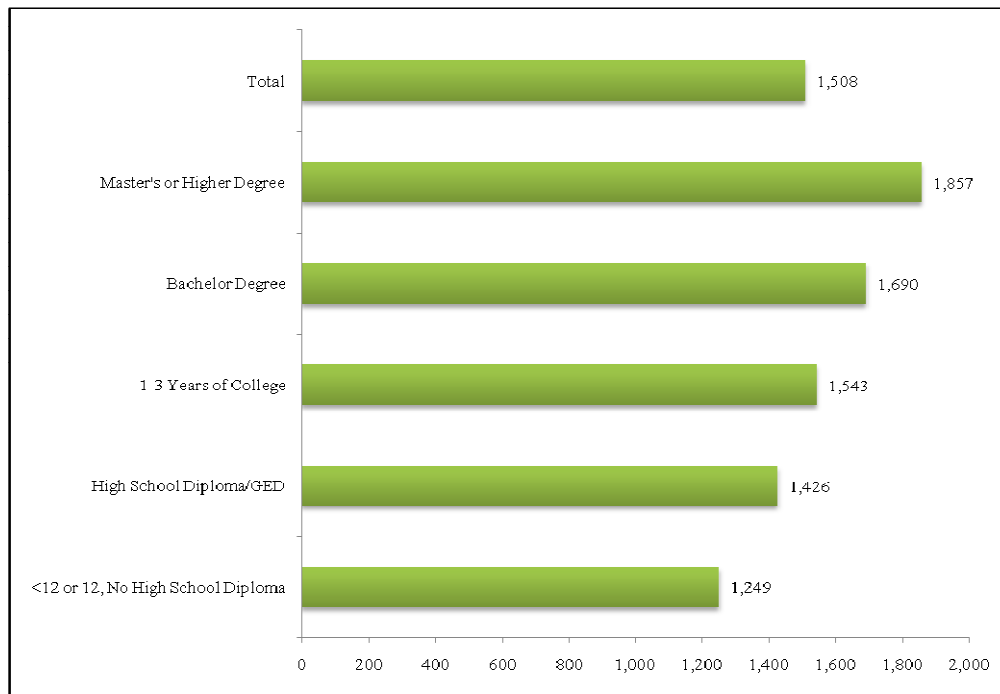
Hours of Work

The annual work rate is among the most fundamental measures of the potential for an individual or group to achieve success in the labor market. A second key factor influencing labor market success and the level of personal earnings is the intensity of work activity over the course of a year. Just as work rates vary systematically by level of educational attainment, so too do the number of annual hours of employment. Individual respondents to the ACS provide information regarding the number of weeks during the year and the number of hours per week that they were employed during the preceding 12 months. Annual hours of employment are the product of the two—weekly hours and annual weeks of employment. The findings provided in this section of the report are based mean annual hours of work of 18 to 64 year old adults (excluding school-enrolled 18- to 22-year olds in each educational attainment group.

¹³ In 2006, nationwide, 53 percent of females who had dropped out of high school were employed, compared to 77 percent of male dropouts; this yields a relative difference of 31 percent, slightly lower than the relative difference found between the genders in the Los Angeles metro area. See: 2007. *When Girls Don't Graduate, We All Fail: A Call to Improve High School Graduation Rates for Girls*. National Women's Law Center.

Chart 3 reveals that the average non-elderly adult in the Los Angeles metro area who was employed at some point during the prior year worked about 1,508 hours over the year. Similar to the pattern observed in work rates, there was a strong positive connection between education and hours of work. Those employed residents with fewer years of schooling worked considerably fewer hours than their counterparts with higher levels of educational attainment.

Chart 3: Mean Annual Hours of Work of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment, 2005-2007 (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

Employed residents of the Los Angeles metro area with a college degree worked on average between 1,690 and 1,857 hours in the prior year; a level equivalent to that of a working year round in a full-time job. College graduates in the metro area worked considerably more hours over the course of the year than those residents who had a high school diploma, but no college education. Employed residents in the Los Angeles metro area who had a high school diploma only worked an average of 1,426 hours in the prior year; equal to about 84 percent of the mean number of annual hours of work supplied by those with a bachelor's degree and about

77 percent of the mean number of annual hours of work supplied by residents with a master's degree or higher.

High school dropouts worked the fewest number of hours per year. Employed residents of the Los Angeles metro area who were dropouts worked on average 1,249 hours in the prior year, representing 177 fewer hours than their high school graduate counterparts, or a relative difference of 12 percent. The mean number of annual hours of work of high school dropouts in the Los Angeles metro area was a quarter less than that of their counterparts with a bachelor's degree, and a third less than that of their counterparts with a master's degree or higher.

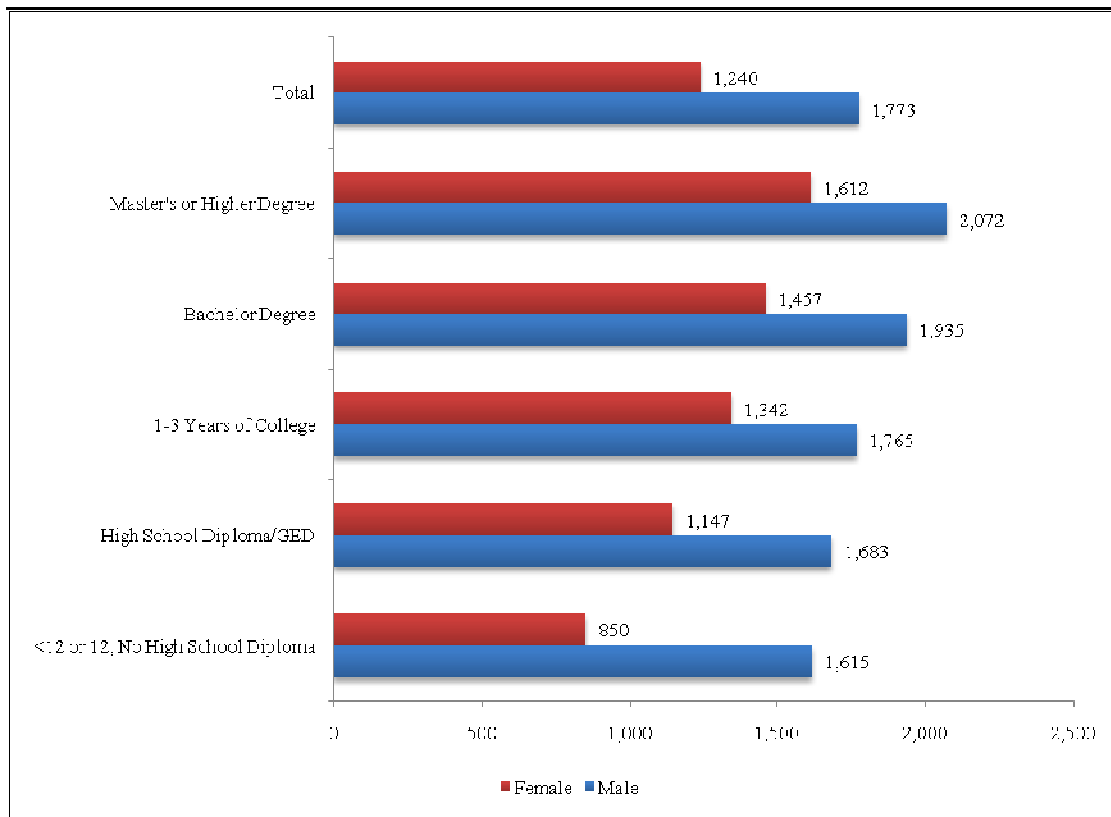
Gender Differences in Hours of Work

The number of annual hours of work supplied also varies considerably within the Los Angeles metro area by gender. While the mean number of annual hours of work is positively associated with the level of educational attainment for both men and women, employed women in the Los Angeles metro area are likely to work significantly fewer hours per year than men at every level of educational attainment. The data in Chart 4 and Table 2 reveal that the size of this gap is especially large for high school dropouts.

Female residents of the Los Angeles metro area who were employed in the prior year worked an average of 1,240 hours during that year, while their male counterparts worked on average 1,773 hours: 500 hours more a year, or a relative difference of 30 percent. Among employed residents of the Los Angeles metro area who had a college degree, men worked an average of between 22 percent and 25 percent more hours in the prior year than women did. Meanwhile, among employed high school graduates in the Los Angeles metro area (with no college) the gender gap in the mean number of annual work hours supplied is even greater in comparison to who have some post-secondary schooling. The mean annual hours of work of men who had just a high school diploma education was 1,683 hours or 32 percent more than the mean hours of work among their female counterparts (who on average worked 1,147 hours).

The gender gap in the mean number of annual hours of work supplied is greatest among high school dropout residents. Employed men in the Los Angeles metro area who had failed to earn a high school diploma or its equivalency worked an average of 766 more hours in the

Chart 4: Mean Annual Hours of Work of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, by Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Table 2: Absolute and Relative Difference between Men and Women in their Mean Annual Hours of Work (18 to 64 year Old Civilian, Non-Institutional Population) in the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)

Educational Attainment	Male	Female	Absolute Difference	Relative Difference
<12 or 12, No High School. Diploma	1,615	850	-765	-47%
High School Diploma/GED	1,683	1,147	-536	-32%
1-3 Years of College	1,765	1,342	-423	-24%
Bachelor Degree	1,935	1,457	-478	-25%
Master's or Higher Degree	2,072	1,612	-460	-22%
Total	1,773	1,240	-533	-30%

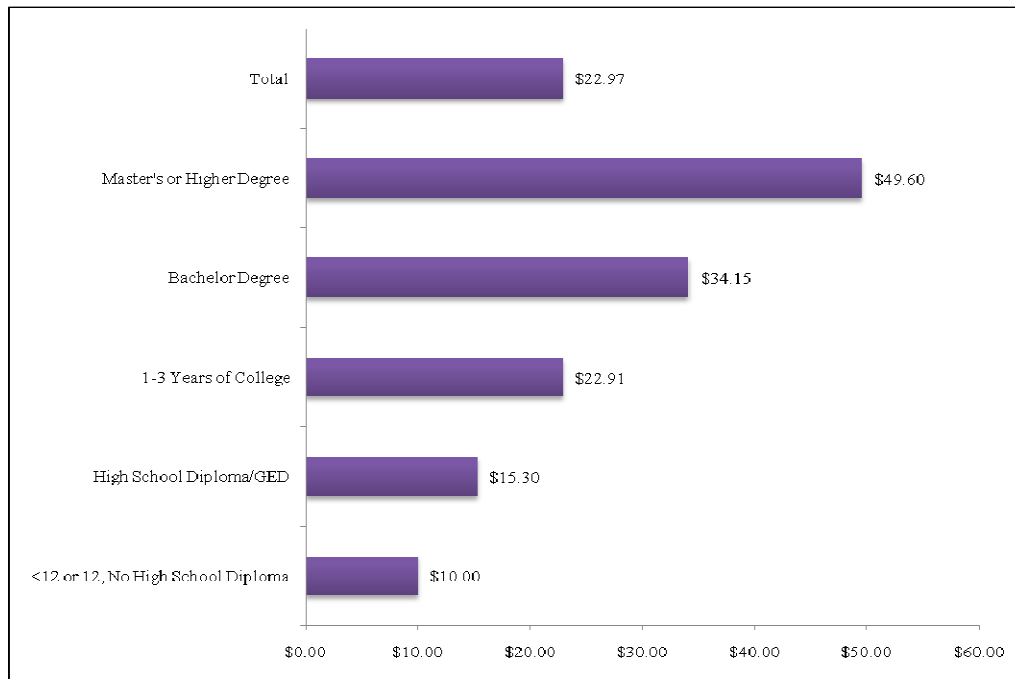
Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

previous year than their female counterparts did (1,615 hours versus 850 hours, respectively). In other words, employed male high school dropouts from the Los Angeles metro area worked almost twice as many hours in the previous year as did employed female high school dropouts.

Hourly Rate of Pay

The hourly rate of pay is the third fundamental determinant of the level of annual and lifetime earnings. Together with the work rate and annual hours of work, the hourly rate of pay is the basis upon which the annual earnings of workers are determined. We have already observed that the chances that an individual works at all over the course of a given year and the number of annual hours of work among workers are closely connected to their level of educational attainment. Similarly, Chart 5 reveals that the hourly rate of pay of adults in the Los Angeles metro area is also closely connected to their level of educational attainment. Individuals with higher levels of education earn a higher wage per hour than those with lower levels of education.

Chart 5: Mean Annual Hourly Pay of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment, 2005-2007 (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

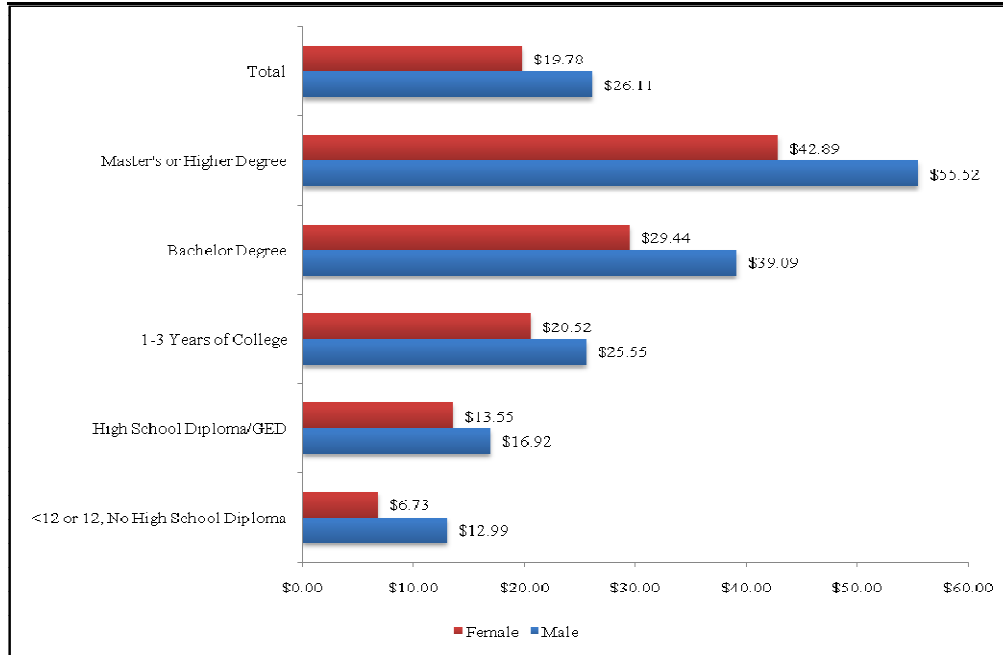
In the Los Angeles metro area employed residents with a master's degree earn an average of almost \$50.00 per hour, while those with a bachelor's degree had average earnings of about \$34.00 per hour. High school graduates had an hourly pay that averaged about \$15.00; a rate of pay that is less than half the hourly rate of pay of those with a bachelor's degree and less than a third of those with a master's degree. Employed high school dropouts had the lowest hourly wage rate of just \$10.00 per hour; a rate of hourly pay that is only two thirds of the mean hourly wage of high school graduates and only 29 percent of the mean hourly earnings of residents with a bachelor's degree.

Gender Differences in Hourly Rate of Pay

Adult female residents of the Los Angeles metro area earned on average nearly one-quarter less than the mean hourly wage of adult male residents (\$20.00 per hour versus \$26.00 per hour, respectively). Female residents who had dropped out of high school earned only about half of the hourly wage of their male counterparts (\$6.73 versus \$12.99, respectively). Within each educational group, women on average earn considerably less per hour than men but a strong positive relationship exists between hourly pay and educational attainment among men and women. This relationship (between hourly wage and education) is particularly strong among women in the Los Angeles metro area.

Male and female high school graduates in the Los Angeles metro area both had higher mean hourly earnings than high school dropouts. However, while male high school graduates earned on average almost a third more than their counterparts who were a dropout (\$16.92 versus \$12.99, respectively), female high school graduates earned on average more than twice as much per hour as female dropouts (\$13.55 versus \$6.73, respectively). Men in the Los Angeles metro area with a bachelor's degree had a mean hourly pay that was more than three times as high as their counterparts who were a high school dropout (\$39.09 versus \$12.99, respectively). Meanwhile, women who had a bachelor's degree earned, on average, more than four times as much per hour than their dropout counterparts (\$29.44 versus \$6.73, respectively). Furthermore, men with a master's degree or higher had a mean hourly pay rate that was more than four times that earned by their high school dropout counterparts (\$55.52 versus \$12.99, respectively). However, the hourly wage difference between women with a master's degree and women who were a high school dropout was even greater.

Chart 6: Mean Annual Hourly Pay of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, by Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

Table 3: Mean Annual Hourly Pay Advantage of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area in each Educational Group Relative to Dropouts, by Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)

Educational Attainment	Male	Female
<12 or 12, No High School Diploma	100%	100%
High School Diploma/GED	130%	201%
1-3 Years of College	197%	305%
Bachelor Degree	301%	437%
Master's or Higher Degree	427%	637%
Total	201%	294%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

Female residents of the Los Angeles metro area with a master's degree or higher earned on average more than six times as much per hour as female residents who had dropped out of high school (\$42.89 versus \$6.73, respectively).

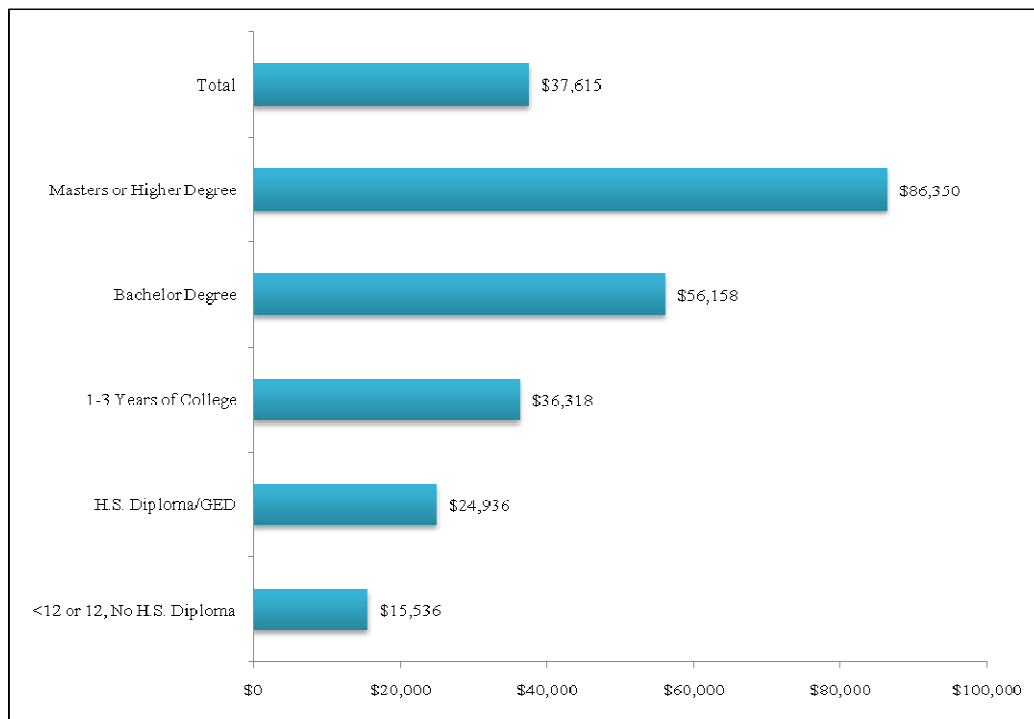
Earnings of Los Angeles Metro Area Non-Elderly Adults by Educational Attainment

Annual Earnings

The measure of annual earnings is a more comprehensive indicator of labor market success: the mean annual earnings of an individual is the product of their rate of work, their annual hours of work and their hourly wage rate. In the previous section of this paper, we found large and systematic differences by educational attainment in these three measures. For each measure we found strong positive relationships with educational attainment, with high school dropouts in the Los Angeles metro area faring quite poorly on each measure. As the level of educational attainment rose we found that:

- the work rate increased markedly,
- the number of annual hours of work increased considerably, and
- the hourly wage rose sharply.

Chart 7: Mean Annual Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment, 2005-2007 (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

As expected, the large differences in these three measures by educational attainment translate into substantial differences in the annual earnings of residents of the Los Angeles metro area by their level of educational attainment. Annual earnings are strongly positively associated with educational attainment. Chart 7 shows that the mean annual earnings of high school dropout adult residents of the Los Angeles metro area were about \$15,500. These annual earnings are equal to about six tenths of those earned by high school graduates (\$24,900), to just over a quarter of those earned by residents with a bachelor's degree (\$56,100) and to less than a fifth of those earned by residents with a Master's degree (\$86,400). Or, put another way, high school dropouts from the Los Angeles metro area earn 62 cents for every \$1 earned by a high school graduate in a year, 28 cents for every \$1 earned by a college graduate with a bachelor's degree and just 18 cents for every \$1 earned by a college graduate with a master's degree.

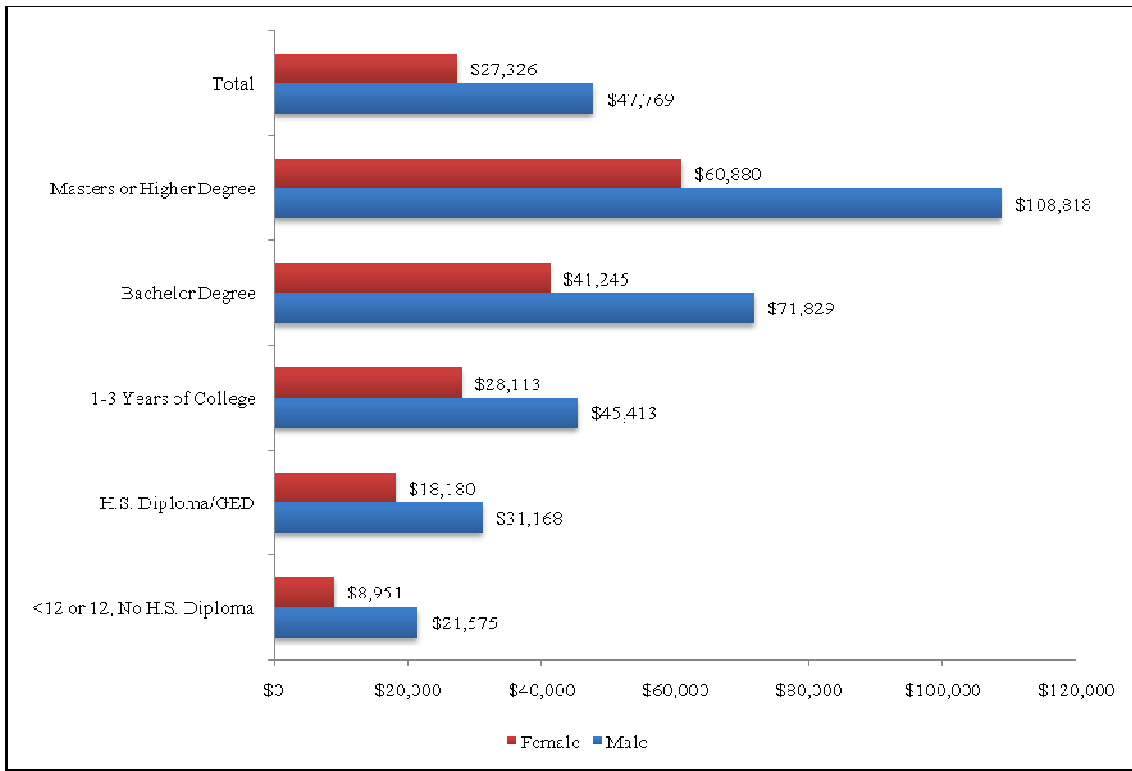
Gender Differences in Annual Earnings

Female adult residents of the Long Angeles metro area who had dropped out of high school not only are less likely to find employment, and work for fewer hours and earn lower hourly wages when they do find employment than better educated female residents, but for each of these measures, female high school dropouts have significantly worse outcomes than male dropouts.

Similar gender gaps in mean annual earnings exist in the Los Angeles metro area. Female residents of the Los Angeles metro area have considerably lower mean annual earnings than their male counterparts at each level of educational attainment.¹⁴ For example, adult female high school dropouts in the Los Angeles metro area have mean annual earnings of about \$9,000. This is less than half the mean annual earnings of male dropouts (almost \$22,000) or, in other words, female dropouts only earn 41 cents per year for every \$1 earned by a male dropout.

¹⁴ A gender gap in the earnings of high school dropouts is also found nationally, albeit to a smaller extent than in the Los Angeles metro area: across the United States, males at every level of education make more than females with similar educational backgrounds, with the wage gap between men and women being the highest among high school dropouts. For example, in 2005 adult women without a high school diploma had median annual earnings of \$15,520; equal to less than two thirds of the median annual earnings of male dropouts (\$24,698). See: 2007. *When Girls Don't Graduate, We All Fail: A Call to Improve High School Graduation Rates for Girls*. National Women's Law Center.

Chart 8: Mean Annual Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Table 4: Mean Annual Earnings Advantage of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area in each Educational Group Relative to Dropouts, by Gender, 2005-2007, (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)

Educational Attainment	Male	Female
<12 or 12, No H.S. Diploma	100%	100%
H.S. Diploma/GED	144%	203%
1-3 Years of College	210%	314%
Bachelor Degree	333%	461%
Masters or Higher Degree	504%	680%
Total	221%	305%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

In addition, the mean annual earnings gap between female high school dropouts and better educated women is greater than the gap between male dropouts and better educated males. Male and female high school graduates in the Los Angeles metro area both had higher mean annual earnings than their high school dropout counterparts. However, while male high school graduates earned on average just over 40 percent more than male dropouts (\$31,000 versus \$22,000, respectively), female high school graduates earned on average per year twice as much as female dropouts did (\$18,000 versus \$9,000, respectively). Men in the Los Angeles metro area with a bachelor's degree had a mean annual pay that was more than three times as high as their high school dropout counterparts (\$72,000 versus \$22,000, respectively). Meanwhile, women who had a bachelor's degree earned, on average, more than four times as much per year as female dropouts (\$41,000 versus \$9,000, respectively). The earnings of the best educated men, those with a master's degree or higher, was five times higher than that of male high school dropouts (\$109,000 versus \$22,000, respectively) whereas the best-educated women earned on average almost seven times as much per year as female high school dropouts (\$61,000 versus \$9,000, respectively).

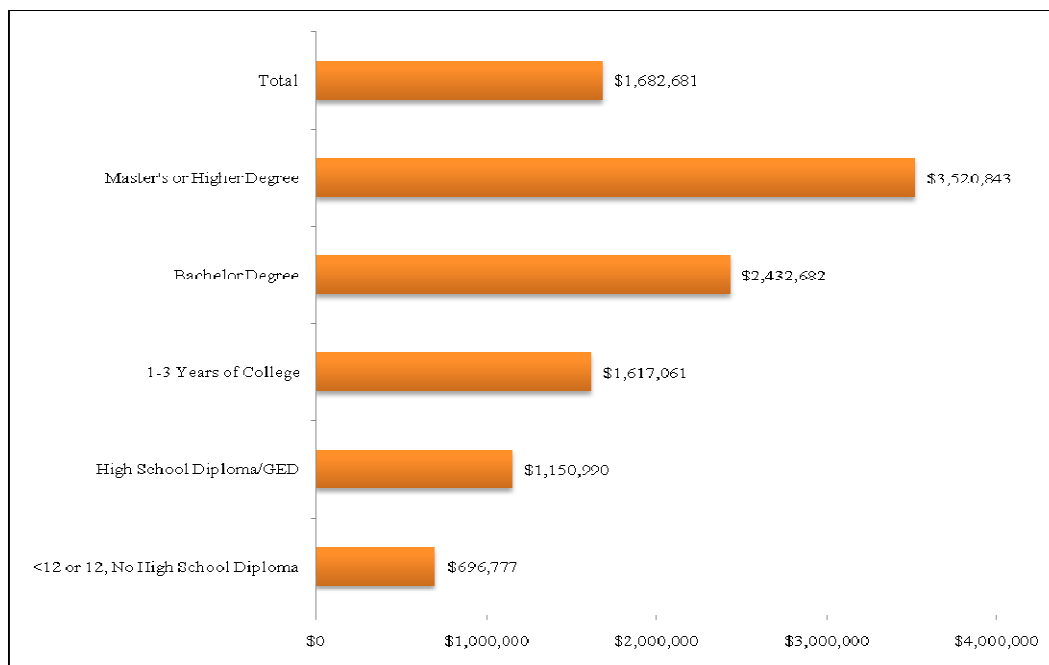
Expected Lifetime Earnings

The cumulative effect of lower work rates, fewer annual hours of work, and lower hourly wages among high school dropouts is a very low level of earnings over their working life. The potential lifetime impacts of the labor market deficits associated with dropping out of high school is evident in the sizable gaps between the expected lifetime earnings of high school dropout residents of the Los Angeles metro area and their better educated counterparts. We have produced estimates of lifetime earnings of the residents of the Los Angeles metropolitan area by first estimating the age-earnings profiles that examine the mean annual earnings of residents for single ages between the ages of 18 and 64 in each educational group. These annual earnings estimates are then aggregated over the 47 year time period to produce the expected mean lifetime earnings by their level of educational attainment. These cross-sectional lifetime earnings estimates assume that the current age-earnings profiles of individuals will remain unchanged in the future. However, this assumption is somewhat optimistic from the perspective of dropouts because the earnings history of high school dropouts in the Los Angeles metro area since the end of the 1970s has been one of large and continuing declines in annual and lifetime earnings.

Based on this cross-sectional methodology, we have produced estimates of the expected lifetime annual earnings of residents in the Los Angeles metro area by the level of their educational attainment. We have also produced expected lifetime earnings by education separately for men and women adult residents of the metro area. The findings in Chart 9 reveal that adult residents of the Los Angeles metro area can expect to have lifetime earnings of about \$1.683 million. However, as with the previous measures of labor market outcomes, the expected lifetimes earnings of residents of the Los Angeles metro area is closely connected to their level of educational attainment. Individuals with higher levels of education have a substantially higher expected lifetime earnings than those with lower levels of education.

Adult residents of the Los Angeles metro area with a college degree have far better lifetime earnings prospects in than those with lower levels of education, especially those who dropped out of high school. Metro Los Angeles residents with a master’s degree or higher can expect to earn more than \$3.521 million over their working lives; a level of earnings that is three

Chart 9: Expected Lifetime Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment 2005-2007 (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

times that of high school graduates (without a college education) and five times that of high school dropouts. Meanwhile, adult residents of the Los Angeles metro area with a bachelor's degree can expect to earn almost \$2.433 million over their working lives; a level of earnings that is double that of high school graduates (without a college education) and more than three times that of high school dropouts. High school graduates with no post secondary schooling also have higher lifetime earnings than those who did not complete high school. High school graduates are expected to earn \$1,151 million over their working lives; 65 percent more than that the \$697,000 lifetime earnings of high school dropouts.

These lifetime earning differences suggest fundamentally different life experiences for residents of the metro area based at least in part on their ability to persist in high school and enroll into the post secondary system. A better understanding of income and earnings fairness issues in the Los Angeles metro area begins with an understanding of the extraordinary power that educational attainment decisions of young people exert on the expected lifetime earnings of adults.

Gender Differences in Expected Lifetime Earnings

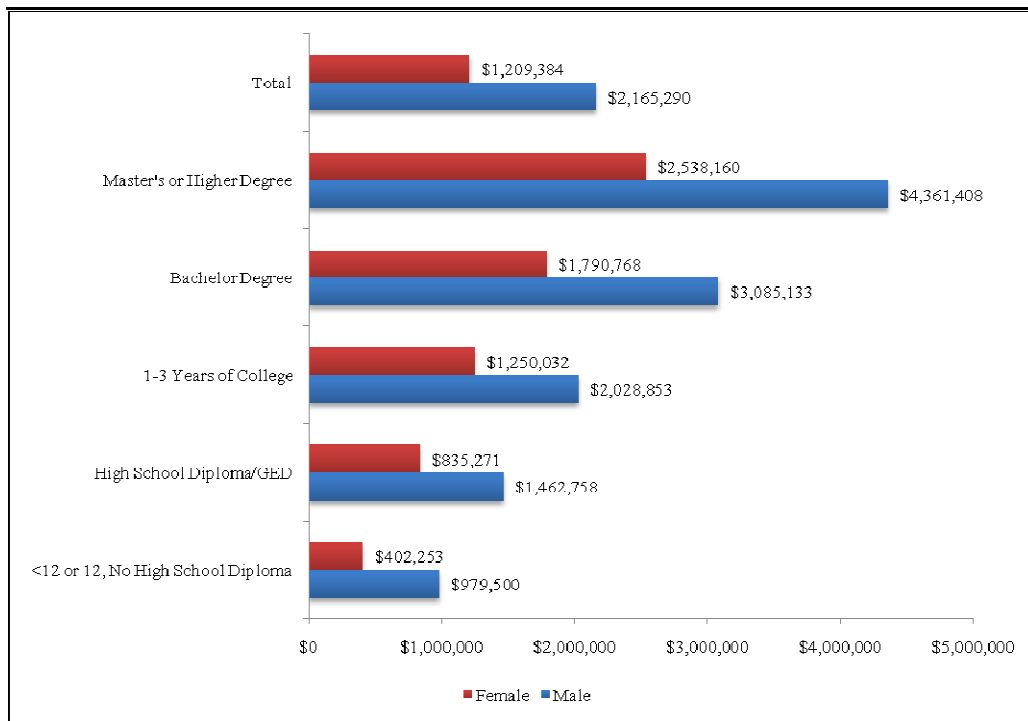
Analysis of the expected lifetime earnings of adults in the Los Angeles metro area separately for men and for women, and by their level of educational attainment, reveals that females are expected to earn 44 percent less than males during their working lives (\$1.209 million versus \$2.165 million, respectively). While women have expected lifetime earnings that are substantially smaller than those of men within each educational attainment category, a strong positive relationship also exists between expected lifetime earnings and educational attainment across both genders in the Los Angeles metro area. This relationship is stronger among females than among males.

Male high school dropout residents in the Los Angeles metro area can expect to earn almost \$980,000 over their working lives, while men who earn a high school diploma will earn 1.5 times this amount with expected lifetime earnings of almost \$1.463 million, and men who earn a bachelor's degree will earn three times this amount with expected lifetime earnings of almost \$3.085 million.

Women high school dropouts in the Los Angeles metro area have an extremely poor lifetime earnings potential. Dropout female residents can expect to earn just over \$402,000

during their working lives, whereas a female with a high school diploma or GED will earn two times this amount with expected lifetime earnings of just over \$835,000. The earnings advantage to women who complete a bachelor’s program relative to those who are high school dropouts is extraordinarily high. College graduate women have expected lifetime earnings of \$1.791 million; a level of earnings that is more than four times as high as that of high school dropout women. The large gaps between the work rates, annual hours, hourly earnings, and annual earnings of female high school dropouts and their better educated counterparts accumulate over their working lifetimes into very large differences in what each group of these women are expected to earn over their working lifetimes. Men and women in the Los Angeles metro area reap sizable labor market benefits from additional educational attainment. However, the sizes of the employment and earnings premiums associated with additional education are considerably higher among women than among men.

Chart 10: Expected Lifetime Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Trends in the Expected Lifetime Earnings of Los Angeles Metro Area Non-Elderly Adults by Educational Attainment, 1979 to the Present Day (2005-2007)

Powerful long-term changes in the industrial and occupational structure of the Los Angeles economy have resulted in a rise in the level of demand for persons with post secondary levels of educational attainment, while substantially diminishing demand for workers with fewer years of schooling. As a consequence of the changing demand for education, there has been a sharp decline in the lifetime earnings of poorly educated residents of the metropolitan Los Angeles area and a sizable increase in the lifetime earnings of their college educated counterparts.

A comparison of the expected lifetime earnings of adult residents of the Los Angeles metro area for two different time periods: 1979 and the present day (2005-2007) is presented in Table 5. The estimates provided in the table are derived from our analysis for the Los Angeles metropolitan area, of the public use data files from the 1980 decennial census and the 2005, 2006 and 2007 ACS data files. This historical data paints a dismal picture of the living standards of high school dropouts today in comparison to what they were at the end of the 1970s.

The expected lifetime earnings of adult residents of the Los Angeles metro area have increased modestly over the past quarter of a century, rising from \$1.499 million during 1979 to \$1.683 million today, a real (inflation-adjusted) increase of 12 percent over more than 25 years. This modest overall increase in lifetime earnings consists of wide variations across individuals by their level of educational attainment, with high school dropouts faring worse.

Between 1979 and 2005-2007, high school dropouts in the Los Angeles metro area experienced an extraordinarily large decline in their expected lifetime earnings. During 1979 dropout residents of the metro area had expected lifetime earnings of about \$883,000, but this figure has now declined to \$697,000. This represents a loss in inflation adjusted terms of more than \$186,000, or a 21 percent relative decline in the lifetime earnings power of high school dropout residents of the Los Angeles metro area.

Table 5: Trends in Expected Lifetime Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment, 1979 to the Present Day (2005-2007), (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)

Educational Attainment	1979	2005-2007	Relative Change (1979-2005/2007)
<12 or 12, No High School Diploma	\$882,571	\$696,750	-21%
High School. Diploma/GED	\$1,285,295	\$1,150,961	-10%
1-3 Years of College	\$1,607,973	\$1,617,029	1%
Bachelor Degree	\$2,219,475	\$2,432,650	10%
Master's or Higher Degree	\$2,804,570	\$3,520,810	26%
Total	\$1,498,871	\$1,682,650	12%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

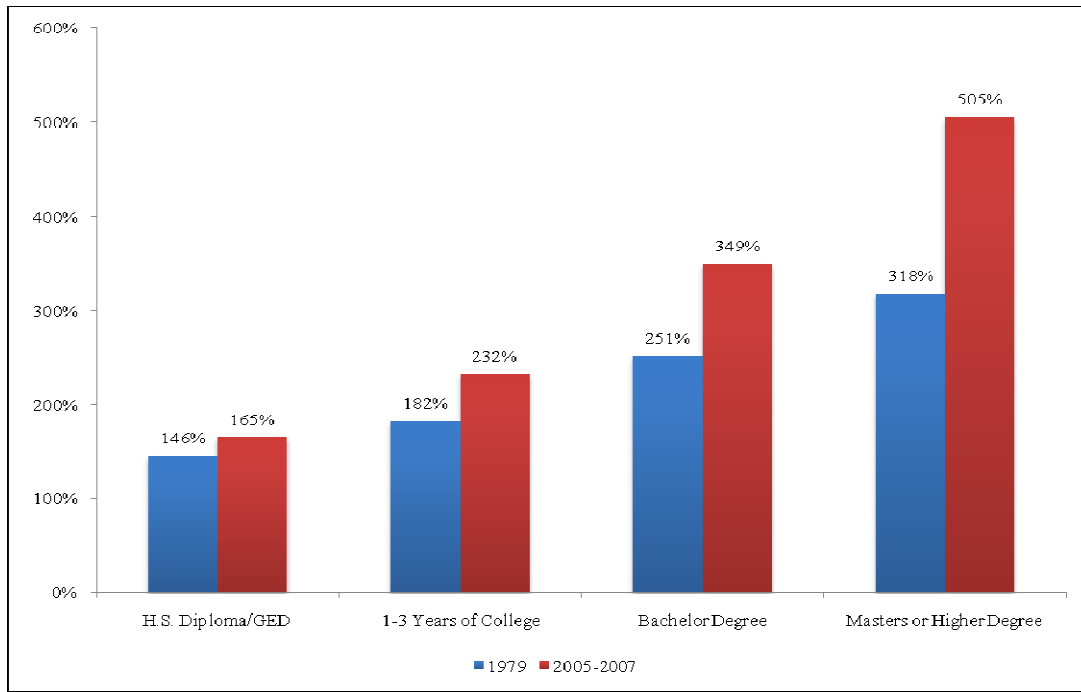
Over the same period of time, the expected lifetime earnings of high school graduate residents of the Los Angeles metro area also declined, albeit by a smaller amount; from \$1.285 million in 1979 to \$1.151 million in 2005-2007, representing a 10 percent loss over this period. Although the lifetime earnings of high school graduates and high school dropouts declined, the rate of decline was much larger (more than twice as high) among high school dropouts. As Chart 11 reveals, these trends have resulted in a substantial increase in the lifetime earnings advantage to completing high school in the area. In 1979, the lifetime earnings of high school graduates in the Los Angeles metro area were 46 percent higher than those of high school dropouts. Today, the expected lifetime earnings advantage of high school graduates relative to high school dropouts has increased to 65 percent.

In addition, relative to the expected lifetime earnings of other educational subgroups of residents, the expected lifetime earnings experiences of high school dropouts in the Los Angeles metro area have declined at an exceptional pace over the last two and one half decades.

Unlike residents who dropped out of high school, those metro area residents who have a college education have enjoyed an increase in their lifetime earnings power between 1979 and today. Over this period of time, the expected lifetime earnings of adults in the Los Angeles metro area with a bachelor's degree increased by 10 percent (from \$2.219 million to \$2.433 million), while the expected lifetime earnings of those adults with a master's degree or higher increased by 26 percent (from \$2.805 million to \$3.521 million). The reverse trends in the size of the lifetime earnings of high school dropouts and college graduates has resulted in sharp increases in the gaps

between their lifetime earnings. In 1979, college graduates with a bachelor’s degree could expect to earn about 250 percent more over their working lives than dropouts; today the lifetime earnings advantage of a bachelor’s degree relative to dropping out of high school has jumped to 350 percent. At the master’s plus level the lifetime earnings advantage relative to a high school dropout has increased from an already very large 320 percent in 1979 to 510 percent today. These findings suggest a widening gap in the distribution of earnings among the residents of the Los Angeles metro area with a major part of the growing earnings disparities associated with disparities in the level of their educational attainment.

Chart 11: Trends in the Expected Lifetime Earnings Differences between High School Dropouts and those with Higher Levels of Educational Attainment in the Los Angeles Metro Area, 1979 to the Present Day (2005-2007)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

An increase in the demand for better-educated and high skill workers and a decline in the demand for poorly educated low-skill workers that underlies the reverse trends in the lifetime earnings of the groups is expected to continue in the future. The services industry that employs a large share of college graduates is expected to continue to grow whereas employment

in the manufacturing industry that employs fewer college graduates is expected to decline. Furthermore, because of continuing technological changes, the occupational staffing patterns in the existing industries are expected to tilt in favor of college graduates and workers with sophisticated skills. Projections of employment in the state of California expect the share of services industry (including personal business and health, legal, and educational services) employment to increase from 37 percent in 2005 to 40 percent by 2025. In contrast, the share of employment in manufacturing is expected to decline from 11 percent to 8 percent.¹⁵ Indeed, it has been predicted that by 2025, 41 percent of the jobs in the state of California will require a college degree.¹⁶

Trends in Expected Lifetime Earnings of Los Angeles Metro Area Male Non-Elderly Adults

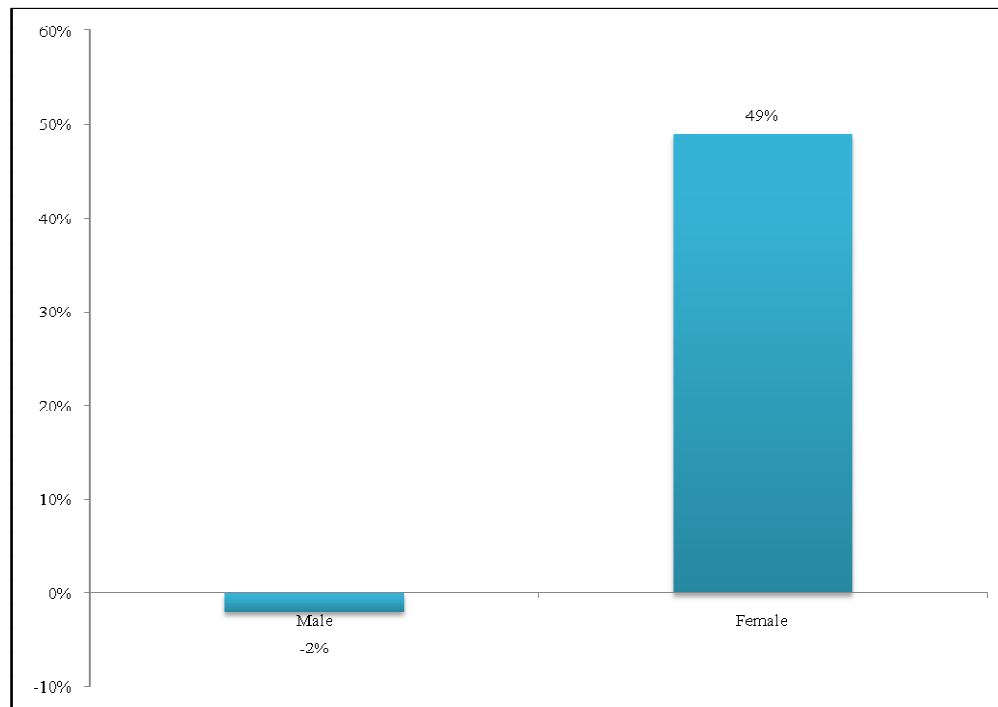
As shown in Chart 12 the long-term trends in expected lifetime earnings of men in the Los Angeles metro area have been much different to those observed for women. The average expected lifetime earnings of adult males in the Los Angeles metro area have remained unchanged since 1979, falling slightly (by 2 percent) from \$2.218 million to \$2.165 million. Men have not made any progress in their lifetime earnings over the past 25 years. In contrast, female residents of the Los Angeles metro area have experienced a large increase in their expected lifetime earnings since 1979. At that time, adult women residents of the Los Angeles metro area had expected lifetime earnings of about \$811,000. Today their expected lifetime earnings has almost doubled to \$1.209 million.

As shown in Table 6, the nature of change in the expected lifetime earnings of men in the Los Angeles metro area varies widely by level of educational attainment. Men who had dropped out of high school saw their expected lifetime earnings fall by 28 percent, from \$1.364 million during 1979 to \$979,500 today. The findings in Table 7 reveal that this contraction in the expected lifetime earnings of all dropout men aged 18 to 64 in the Los Angeles metro area over this period of time is not attributable to changes in their rate of work or in their mean annual hours of

¹⁵ September 2008. *Just the Facts: California's Future Economy*. Public Policy Institute of California.

¹⁶ Hans Johnson and Ria Sengupta. April 2009. *Closing the Gap: Meeting California's Need for College Graduates*. Public Policy Institute of California; Deborah Reed. May 24th 2008. *Prepare Less-educated Workers for the Shifting Economy*. Riverside Press-Enterprise.

Chart 12: Relative Change in the Real Expected Lifetime Earnings of Men and Women Adult Residents of the Los Angeles Metro Area, 1979 to the Present Day (2005-2007)
(in 2007 Constant Dollars)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

work. In fact, the work rate of high school dropouts increased by 3.6 percentage points and their mean annual hours of work increased by 138 hours or 9 percent. Rather, this significant decline in the expected lifetime earnings of adult men who had dropped out of high school in the Los Angeles metro area can solely be accounted for by a sharp decrease in their hourly rate of pay: between 1979 and today the average hourly earnings of dropout men fell by 25 percent, from \$17.30 to \$12.99.

Male residents of the metro area who had successfully graduated from high school, but did not go to college, also experienced a substantial reduction in their expected lifetime earnings between 1979 and today (by 27 percent, from \$2.004 million to \$1.463 million). Similar to male high school dropouts, this decline can mainly be accounted for by a sharp reduction in the mean hourly rate of pay of high school graduates during this period of time (by 26 percent, from \$22.79 in 1979 to \$16.92 today).

Table 6: Trends in Expected Lifetime Earnings of the 18 to 64 Year Old Civilian, Non-Institutional Male Population of the Los Angeles Metro Area, By Level of Educational Attainment, 1979 to the Present Day (2005-2007), (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)

MALES

Educational Attainment	1979	2005-2007	Absolute Change	Relative Change
All	\$2,218,121	\$2,165,290	-\$52,831	-2%
<12 or 12, No High School Diploma	\$1,363,617	\$979,500	-\$384,117	-28%
High School Diploma/GED	\$2,004,341	\$1,462,758	-\$541,583	-27%
1-3 Years of College	\$2,333,620	\$2,028,853	-\$304,767	-13%
Bachelor Degree	\$2,924,067	\$3,085,133	\$161,066	6%
Master's or Higher Degree	\$3,444,028	\$4,361,408	\$917,380	27%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

Table 7: 1979 to the Present Day (2005-2007) Change in the Expected Lifetime Earnings, Work Rates, Annual Hours of Work and Hourly Rate of Pay of the 18 to 64 year Old Civilian, Non-Institutional Male Population of the Los Angeles Metro Area, By Level of Educational Attainment, (Excluding 18 to 22 Year Old Students) (in 2007 Constant Dollars)

MALES

Educational Attainment	Work Rate Change		Annual Hours Change		Hourly Rate of Pay Change	
	Absolute	Percent	Absolute	Percent	Absolute	Percent
All	-1.0%	-1%	33	2%	\$0.38	2%
<12 or 12, No High School Diploma	3.6%	4%	138	9%	-\$4.31	-25%
High School Diploma/GED	-2.4%	-3%	-39	-2%	-\$5.87	-26%
1-3 Years of College	-4.3%	-5%	-68	-4%	-\$1.24	-5%
Bachelor Degree	-1.5%	-2%	62	3%	\$5.36	16%
Master's or Higher Degree	-2.7%	-3%	44	2%	\$14.59	36%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

The expected lifetime earnings of male residents of the Los Angeles metro area who went to college, but did not graduate with a degree, also fell during this period (by 13 percent). This decline can be accounted for by small reductions in their rate of work, their number of annual hours of work, as well as their hourly rate of pay. In contrast, the expected lifetime earnings of male residents of the Los Angeles metro area who had a bachelor's degree increased by 6 percent between 1979 and today (from \$2.924 million to \$3.805 million); the result of a small increase in

the mean number of annual hours of work supplied by this group of male residents during this period of time (by 3 percent) as well as a considerable increase in their hourly rate of pay (by over \$5 or 16 percent).

Meanwhile, the expected lifetime earnings of male residents of the Los Angeles metro area who had a Master's degree or higher increased at an even higher rate over this period of time, increasing sharply by 27 percent between 1979 and today (from \$3.444 million to \$4.361 million). As among those male residents with a bachelor's degree, this increase can be accounted for by a small increase in their mean number of annual hours worked (by 2 percent) and a significant increase in their mean hourly rate of pay (by 36 percent, or almost \$15).

Trends in the Expected Lifetime Earnings of Los Angeles Metro Area Female Non-Elderly Adults

Trends in the expected lifetime earnings of women in the Los Angeles metro area present an overall picture of strong long-term growth, with the exception of females who failed to graduate from high school. As shown by the data in Table 8, overall the expected lifetime earnings of female residents of the Los Angeles metro area increased by more than \$398,000 between 1979 and today, representing a relative rise of almost 50 percent (from \$811,00 to \$1.209 million).

The data in Table 9 reveals that this increase is primarily a result of a substantial increase in the hourly rate of pay of females during this period of time. The hourly pay of women rose by almost 50 percent in the Los Angeles metro area between 1979 and today (from \$13.27 to \$19.78.) However, the sharp rise in the real expected lifetime earnings of women in the Los Angeles metro area over the past two and one half decades was also aided by increases in the job market attachment of women. Between 1979 and today, the work rate of adult women increased moderately, with seven percent more women working today than during 1979. The mean number of annual hours of work of women also an important source of increased annual earnings as women increased their hours of work by 18 percent over the last three decades (from 1,051 hours to 1,240 hours).

The experiences of women in the Los Angeles metro area who failed to complete high school or earn a GED stand in sharp relief to those with higher levels of educational attainment. Female high school dropout residents of the Los Angeles metro area experienced a loss in their already very low level of expected lifetime earnings during this period of time. During 1979

female high school dropouts had expected lifetime earnings of \$445,000; today their real expected lifetime earnings have declined to almost \$402,000, representing a loss of 10 percent in real terms. All of this loss was associated with a reduction in their real hourly rate of pay. The

Table 8: Trends in the Expected Lifetime Earnings of the 18 to 64 Year Old Civilian, Non-Institutional Female Population of the LA Metro Area, By Level of Educational Attainment, 1979 to the Present Day (2005-2007), (Excluding 18 to 22 Year Old Students) (in 2006 Constant Dollars)

FEMALES

Educational Attainment	1979	2005-2007	Absolute Change	Relative Change
<12 or 12, No High School Diploma	\$445,133	\$402,253	-\$42,880	-10%
High School Diploma/GED	\$769,632	\$835,271	\$65,639	9%
1-3 Years of College	\$940,990	\$1,250,032	\$309,042	33%
Bachelor Degree	\$1,105,158	\$1,790,768	\$685,610	62%
Master's or Higher Degree	\$1,517,993	\$2,538,160	\$1,020,167	67%
Females Total	\$810,961	\$1,209,384	\$398,423	49%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

Table 9: 1979 to the Present Day (2005-2007) Change in the Expected Lifetime Earnings, Work Rates, Annual Hours of Work and Hourly Rate of Pay of the 18 to 64 year Old Civilian, Non-Institutional Female Population of the Los Angeles Metro Area, By Level of Educational Attainment, (Excluding 18 to 22 Year Old Students)

FEMALES

Educational Attainment	Work Rate Change		Annual Hours Change		Hourly Rate of Pay Change	
	Absolute	Percent	Absolute	Percent	Absolute	Percent
<12 or 12, No High School Diploma	3.1%	6%	94	12%	-\$1.01	-13%
High School Diploma/GED	0.9%	1%	86	8%	\$1.90	16%
1-3 Years of College	2.5%	3%	143	12%	\$4.54	28%
Bachelor Degree	2.9%	4%	237	19%	\$10.82	58%
Master's or Higher Degree	1.8%	2%	259	19%	\$16.22	61%
All	4.8%	7%	189	18%	\$6.51	49%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

findings in Table 9 reveal that the work rate of female high school dropouts in the Los Angeles metro area increased between 1979 and today (by 6 percent), as did their number of annual hours of work supplied (by 12 percent). These two developments by themselves would have led to an increase in the expected lifetime earnings of dropout women in the Los Angeles metro area. Yet

a considerable reduction in their hourly rate of pay more than offsets these gains. Women dropouts in the Los Angeles metro area saw their hourly rate of pay fall by 13 percent, from \$7.74 to \$6.73, after accounting for inflation.

In contrast to the experience of high school dropouts, female residents in the Los Angeles metro area who had a level of educational attainment equal to, or greater than, a high school diploma experienced an increase in their expected lifetime earnings between the late 1970s and 2005-07 with the biggest gains among those with a college education, particularly those with a bachelor's or a higher degree. While the expected lifetime earnings of female high school graduates, without a college degree, in the Los Angeles metro area increased by 9 percent over this period of time, the expected lifetime earnings of their counterparts with a bachelor's or a master's or higher degree increased, respectively, by 62 percent and 67 percent. These gains were primarily the result of substantial increases in the hourly rate of pay during this time period (by 16 percent for female residents of the Los Angeles metro area who were a high school graduate, by 58 percent for their counterparts who had a bachelor's degree and by 61 percent for those females who had a master's degree).

The Risk of Poverty for Los Angeles Metro Area Non-Elderly Adults by Educational Attainment

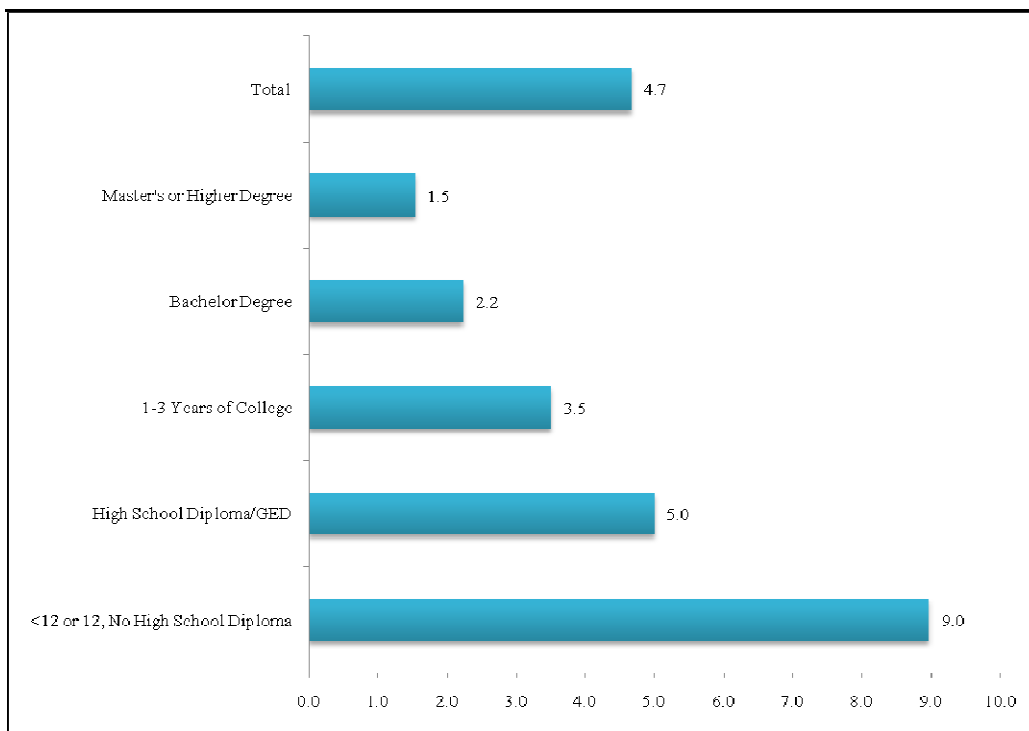
The analysis in this paper, thus far, has revealed that dropping out of high school in the Los Angeles metro area is associated with serious negative labor market outcomes. Dropouts have a weaker attachment to the labor market, are less likely to find employment, work for fewer hours when they do find employment, and earn lower wages than better-educated individuals. Over their entire working lifetime, these employment and earnings disadvantages accumulate into large lifetime employment and earnings deficits. These employment and earnings disadvantages have a further troubling consequence: they increase the risk that an individual will fall into poverty and remain there for a longer period of time.

The findings provided in this section of the report are based on our analysis of the 2005-2007 ACS data to estimate the mean number of years over a lifetime that residents of the Los Angeles metro area between the ages of 18 to 64 (excluding 18 to 22-year old persons enrolled in school) are expected to spend in poverty. Our estimates are presented for all residents of the Los Angeles metro area and for each of the five educational subgroups. The mean number of lifetime

years spent in poverty is a measurement of the average number of years that persons of a given population group is expected to have annual income levels below the official poverty threshold.

The data in Chart 13 reveals that in the Los Angeles metro area the mean number of lifetime years of poverty decreases considerably by educational attainment. High school dropouts are expected to spend the highest number of years in poverty. On average high school dropouts in the Los Angeles metro area are expected to spend 9 years during their lifetime in poverty; a duration long enough to be considered chronic or long-term poverty. This length of time spent living in conditions of poverty is substantially longer than the time experienced by other educational attainment groups. Residents who had graduated from high school, but did not have any college education, on average are expected to spend just over half

Chart 13: The Mean Number of Lifetime Years in Poverty of the 18 to 64 Year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, by Level of Educational Attainment, 2005-2007 (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University.

the amount of time living in poverty that their counterparts who were dropouts did (5 lifetime years versus 9 lifetime years, respectively). Meanwhile, adult residents who had a college degree

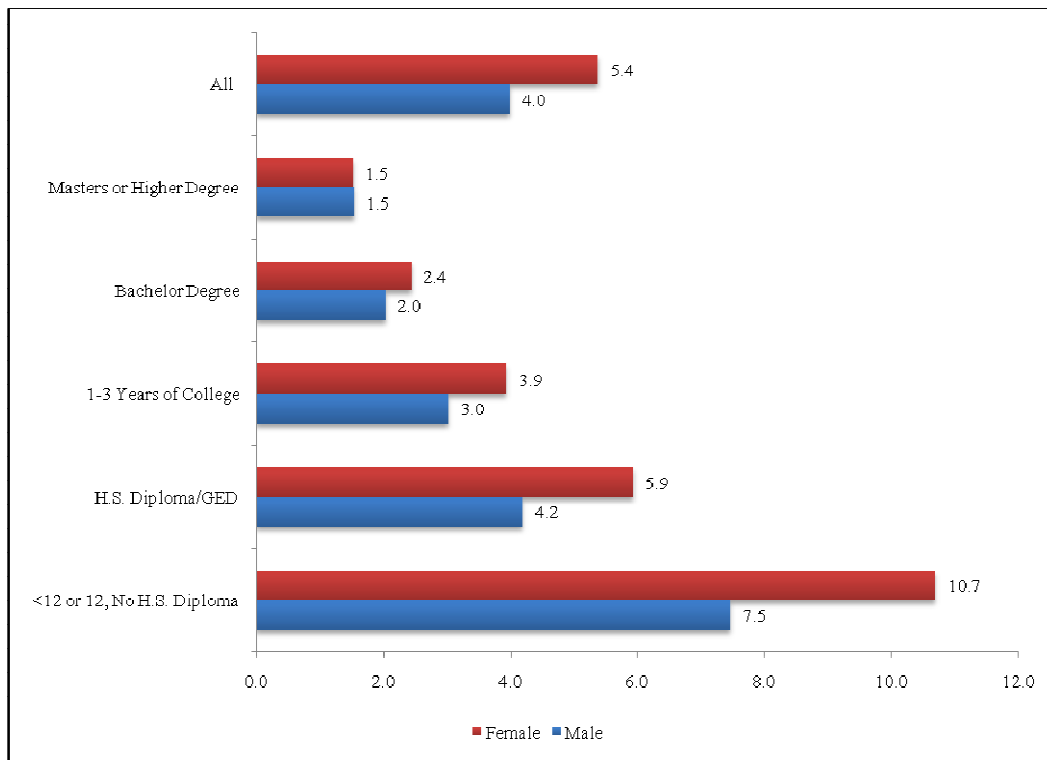
were considerably less likely to spend time living in poverty. The expected lifetime years of poverty among residents of the Los Angeles metro area was 2.2 years among those who had a bachelor's degree and just 1.5 lifetime years among those with a master's or higher degree. Thus, residents of the Los Angeles metro area with a college degree were likely to spend less than a quarter of the amount of years living in poverty than their counterparts who had dropped out of high school.

Gender Differences in the Risk of Poverty

The length of time that an adult spends living in poverty is negatively associated with the levels of educational attainment for both men and women. However, even within the same educational groups men and women are expected to experience different lifetime durations of poverty. As revealed by Chart 14, within the Los Angeles metro area women are likely to spend more lifetime years in poverty than males at every level of educational attainment except among those with a master's or higher level of education. The mean number of lifetime years of poverty among adult female residents of the Los Angeles metro area is 5.4 years; 35 percent more than the lifetime years of poverty among males (4 years). Men and women in this highest educational group are expected to spend just 1.5 years of their lifetimes in poverty. Among those with a bachelor's degree, there is a slight gap in the mean lifetime poverty years between female and male residents (2.4 years among females versus 2 years among males).

The size of this gender gap is larger among residents of the Los Angeles metro area who do not have a college education. Female adult residents of the Los Angeles metro area who graduated from high school, but have no post secondary schooling, on average spend 40 percent more time living in poverty than their male counterparts (5.9 years versus 4.2 years, respectively). Similarly, females who dropped out of high school spend on average 43 percent more lifetime years living in poverty than their male counterparts (10.7 years versus 7.5 years, respectively).

Chart 14: The Mean Number of Lifetime Years in Poverty of the 18 to 64 Year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, by Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Table 10: Absolute and Relative Differences between Males and Females (18 to 64 year Old Civilian, Non-Institutional) in the Mean Number of Lifetime Year in Poverty in the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 2005-2007 (Excluding 18 to 22 Year Old Students)

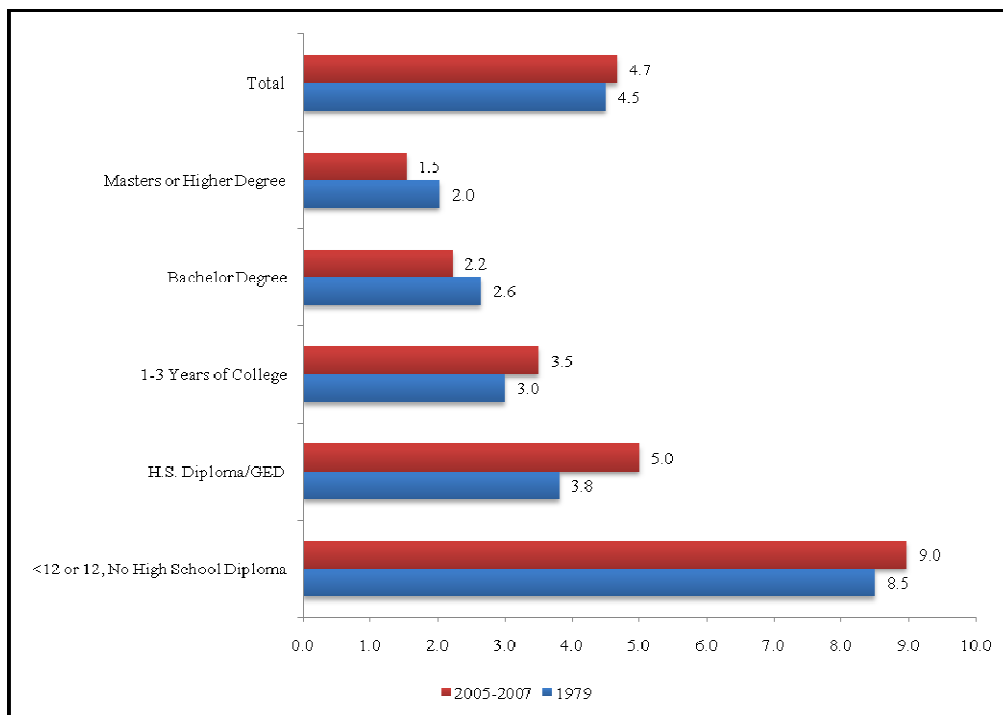
Educational Attainment	Male	Female	Absolute Difference	Relative Difference
<12 or 12, No High School Diploma	7.5	10.7	3.2	43%
High School Diploma/GED	4.2	5.9	1.7	40%
1-3 Years of College	3.0	3.9	0.9	30%
Bachelor Degree	2.0	2.4	0.4	20%
Master's or Higher Degree	1.5	1.5	0.0	0%
All	4.0	5.4	1.4	35%

Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Trends in Risk of Poverty for Los Angeles Metro Area Non-Elderly Adults by Educational Attainment, 1979 to the Present Day (2005-2007)

Just as there has been changes in the work rate, the annual hours of work supplied, the mean hourly pay and the expected lifetime earnings of adults residents from the Los Angeles metro area since 1979, so too have there been changes in the average amount of lifetime years that these residents spend living in poverty. The estimates provided in Chart 15 are derived from our analysis of the decennial census public use data files from the 1980 census along with our analysis of the 2005, 2006 and 2007 ACS files, both for the Los Angeles metro area. This historical data shows that there has been a marginal increase in the average number of years that adult residents of the Los Angeles metro area spend living in poverty, from 4.5 years in 1979 to 4.7 years today. However, these trends also reveal that while the living standards of those

Chart 15: Trends in the Mean Number of Lifetime Years in Poverty of the 18 to 64 Year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, by Level of Educational Attainment, 1979 to the Present Day (2005-2007) (Excluding 18 to 22 Year Old Students)



Source: U.S. Bureau of the Census, American Community Survey, Public Use Micro Data Files, 2005-2007 and Decennial Census Public Use Data Files, 1980, Tabulations by the Center for Labor Market Studies, Northeastern University.

residents of the Los Angeles metro area with a college degree have improved since the end of the 1970s, the same cannot be said for those who do not have a post secondary education.

Adult residents of the Los Angeles metro area who have a college degree are expected to spend fewer years living in poverty over their lifetimes today than they did in 1979. The lifetime years in poverty among residents with a master's degree of higher decreased from 2 years in 1979 to 1.5 years in 2005-07 while those with a bachelor's degree are expected to spend an average of 2.2 years of poverty over their lifetimes today; down from 2.6 years in the late 1970s. In contrast, adult residents of the Los Angeles metro area who do not have a college degree are expected to experience longer lifetime poverty today than they did in 1979. The lifetime duration of poverty of adults with have a high school diploma increased from 3.8 years in 1979 to 5 years in 2005-07, representing an increase of 32 percent. Meanwhile, lifetime poverty among those adult high school dropout residents of the Los Angeles metro area increased from 8.5 years in 1979 to 9 years in 2005-07.

Summary of Key Findings

The dropout crisis in the city of Los Angeles is real. Recent reliable dropout estimation methodologies from the state's department of education have placed the dropout rate of the Los Angeles Unified School District's at 26 percent, while estimates by other organizations have put it at over 50 percent. Mayor Antonio Villaraigosa of Los Angeles has commented that, "*Whatever the number is, we are in crisis*" and has established reducing the city's dropout rate as a primary focus of his administration.¹⁷

Dropping out of high school is associated with serious negative labor market outcomes. Dropouts have a weaker attachment to the labor market, are less likely to find employment, work for fewer hours when they do find employment, and earn lower wages than better-educated individuals earn. Moreover, changes in the industrial structure of employment has reduced the jobs available to poorly educated individuals and exacerbated the negative labor market consequences associated with dropping out of high school.¹⁸ Most dropouts are unable to attain

¹⁷ Shannon Holmes. March 20th 2006. *Los Angeles Mayor Villaraigosa Calls High School Dropout Rate the New Civil Rights Issue*. The United States Conference of Mayors.

¹⁸ Hans Johnson and Ria Sengupta. April 2009. *Closing the Gap: Meeting California's Need for College Graduates*. Public Policy Institute of California; Deborah Reed. May 24th 2008. *Prepare Less-educated Workers for the Shifting Economy*. Riverside Press-Enterprise.

the level of economic success that is accomplished by their better-educated counterparts, and consequently are vulnerable to earning less over their working lifetime and falling into poverty for a prolonged period of time. In this paper we have presented the substantial differences in key labor market outcomes between metropolitan Angelenos who dropped out of school and those with a high school diploma or a higher level of education, and the impact of these negative labor market outcomes on the lifetime employment and earnings prospects of dropouts, as well as their lifetime risk of poverty. However, while all high school dropouts in the Los Angeles metro area suffer significant economic consequences for their educational deficit, this paper has found that these economic costs of educational deficits are particularly steep for women.¹⁹ Compared to their male peers, female residents who failed to graduate from high school in the Los Angeles metro area have higher rates of unemployment, make significantly lower wages, have a lower earnings potential and a higher risk of poverty.

Work Rate: High school dropouts were least likely to have worked at all during a given year. In the Los Angeles metro area 70 percent of all high school dropouts had worked at some time during the prior year, compared to 78 percent of high school graduates, and almost 90 percent of college graduates. The work rate among female dropouts was only 54 percent, in contrast to 85 percent among their male counterparts.

Hours of Work: There was a strong positive connection between the level of education and the hours of work among employed individuals. Those with fewer years of schooling worked much less intensively, while persons with higher levels of education worked many more hours each year. The average annual hours of work among employed dropout residents of the Los Angeles metro area was 1,249 hours, representing 12 percent fewer than high school graduates (1,426 hours), 26 percent fewer than college graduates with a bachelor's degree (1,690 hours), and one-third fewer than college graduates with a master's or a higher degree (1,857 hours). The average number of hours of work among employed female dropouts was only 850 hours; just over half of the average number of hours supplied by employed male dropouts (1,615 hours).

Hourly Rate of Pay: The hourly pay rates of Los Angeles metro area residents were also closely associated with their levels of educational attainment. Residents with a high school

¹⁹ 2007. *When Girls Don't Graduate, We All Fail: A Call to Improve High School Graduation Rates for Girls*. National Women's Law Center.

diploma had mean hourly rates of pay that were less than a third of those who held a master's degree and less than half of those who held a bachelor's degree (\$15.30 versus \$49.60 and \$34.15, respectively). High school dropouts had the lowest mean hourly wage rate, earning an average of \$10.00 an hour; a mean rate of pay only equal to two thirds of that of employed high school graduates. The mean hourly earnings of employed female residents of the Los Angeles metro area with a bachelor's degree or a master's degree were between four and six times bigger than those of their female counterparts who had dropped out of high school (\$29.44 and \$42.89 versus \$6.73, respectively).

Annual Earnings: The mean annual earnings of high school dropout adult residents of the Los Angeles metro area were about \$15,500: only equal to about six tenths of those earned by high school graduates (\$24,900), to just over a quarter of those with a bachelor's degree (\$56,100) and to less than a fifth of those with a Master's degree (\$86,400). Female high school dropouts from the Los Angeles metro area have extremely low mean annual earnings. The mean annual earnings of female dropouts were \$9,000: equal to less than half the mean annual earnings of male dropouts (\$22,000), about half of the earnings of women with a high school diploma (\$18,000), and between four and seven times smaller than the mean annual earnings of women with a college degree (between \$41,000 and \$61,000).

Expected Lifetime Earnings in 2005-07: The cumulative impacts of the poor labor market outcomes of high school dropouts in the Los Angeles metro area are also evident in their sharply lower expected lifetime earnings, relative to those of high school graduates and other better-educated residents. The expected lifetime earnings of the metro area's high school graduate residents were 65 percent higher than that of their high school dropout counterparts (\$1,151,000 versus \$697,000, respectively). Residents of the Los Angeles metro area with a bachelor's degree or master's degree can expect to earn between three and five times the level of lifetime earnings of those who dropped out of high school (\$2.432 million and \$3.520 million versus \$697,000, respectively). Female high school dropouts from the Los Angeles metro area have an extremely poor lifetimes earning potential: during their lifetimes they can expect to earn less than half the amount earned by females who have a high school diploma (only), and less than a quarter of the amount earned by those female residents who have a bachelor's degree (\$402,000 versus \$835,000 and \$1.791 million, respectively).

Trends in Expected Lifetime Earnings, 1979 to 2005-07: Not only are the lifetime earnings of dropouts considerably lower than those of better-educated metropolitan Angelenos, but over time dropouts have seen a substantially large decline in their expected lifetime earnings. Between 1979 and the present day (2005-2007), the lifetime earnings of dropouts declined from \$883,000 to \$697,000, representing a loss of about \$186,000, or 21 percent. In contrast, college graduates with either a bachelor's degree or a master's degree saw an increase in their expected lifetime earnings over this period of time (by 10 percent and 26 percent, respectively). As a result, the gaps between the lifetime earnings of dropouts and other educational groups increased sharply. For example, the lifetime earnings advantage of being a high school graduate, relative to being a high school dropout, in the Los Angeles metro area has increased from 45 percent in 1979 to 65 percent today.

Trends in Lifetime Earnings of Men and Women: Men and women residents of the Los Angeles metro area have seen divergent trends in their lifetime earnings. Between 1979 and the present day, the lifetime earnings of males declined slightly (by 2 percent), whereas those of female residents increased by 49 percent. Unlike their counterparts with a college degree, male dropouts witnessed a large decline in their lifetime earnings (of 28 percent), solely attributable to a sharp 25 percent decline in their hourly rate of pay. Meanwhile, underlying the 49 percent increase in the lifetime earnings of females is a 7 percent increase in their work rate, a sharp 49 percent increase in their hourly rate of pay, and an 18 percent increase in their annual hours of work. Dropouts are the only educational group of females that saw their lifetime earnings decline between 1979 and the present day. Despite a 6 percent increase in their work rate and a 12 percent increase in their annual hours of work, the expected lifetime earnings of this least educated female residents declined by 10 percent. The entire decline is attributable to the 13 percent reduction in their hourly rate of pay between the late 1970s and today.

Risk of Poverty: Another troublesome consequence of the weaker labor market outcomes of high school dropouts in the Los Angeles metro area, relative to their counterparts with a higher level of educational attainment, is that they are more likely to spend a longer period of their lives living in poverty. High school dropouts from the Los Angeles metro area spent an average of 9 years living in poverty; a duration long enough to be considered chronic or long term poverty and considerably longer than the average amount of time residents with higher levels of education were likely to spend living in poverty. Residents with a high school diploma

spent an average of 5 lifetime years in poverty, while those with a bachelor's degree spent an average of 2.2 years and those with a master's degree 1.5 years. The average number of years a female high school dropout spent living in poverty was 10.7 years; 43 percent longer than the average length of time of their male counterparts (7.5 years).

Trends in the Risk of Poverty: Not only are dropouts likely to spend a longer time living in poverty than their better-educated Angelenos, but over time dropouts have also seen a slight increase in their average amount of time spent living in poverty. While residents of the Los Angeles metro area who have a college degree now spend less time today, on average, living in poverty than they did in 1979, their counterparts who dropped out of high school now spend slightly longer (an average of 9 years today, in comparison to an average of 8.5 years in 1979). This increased risk of high school dropouts being in poverty for a longer period of time today than in the late 1970s would appear to primarily be a consequence of the mean hourly rate of pay of this group declining considerably over this same period of time.

Clearly, high school dropouts in the Los Angeles metro area fare quite poorly on each of the three fundamental measures of labor market outcomes presented in this report. Furthermore, the long-term earnings outlook for high school dropouts remains quite poor and their risk of living in poverty for a longer period of time is high. The Los Angeles labor market assigns a very low value to the potential productive capacities that dropout residents bring to the job market. The job content of the labor market in the Los Angeles metro area is very heavily weighted toward occupations and industries that demand workers with high levels of educational attainment and require comparatively few workers with low basic skills proficiencies and few years of schooling.

Moreover, the job content of the area has changed over time – away from manufacturing towards more service-orientated industries - such that employer requirements for workers with higher levels of educational attainment have increased sharply, while the demand for workers with fewer years of schooling has fallen. The reality now facing Los Angeles, as well as the state of California as a whole, is that good jobs for low-skilled workers are disappearing. These trends have exacerbated the economic misfortunes of dropout residents of the city. Unfortunately, these trends are expected to continue resulting in a continued deterioration of the labor market

outcomes of the metro area's dropout residents and a further widening of the gaps between the labor market outcomes of dropouts and their better-educated counterparts.

**Appendix A: Educational Attainment among Non-Elderly Adults
in the Los Angeles Metro Area, 1979 to the Present Day (2005-
2007)**

Table A1: The Educational Attainment of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Gender, 1979 to the Present Day (2005-2007), (Excluding 18 to 22 Year Old Students)

Gender	Educational Attainment	1979	Present Day (2005-2007)
All	<12 or 12, No H.S. Diploma	25.3%	22.3%
	H.S. Diploma/GED	29.4%	23.0%
	1-3 Years of College	26.6%	25.7%
	Bachelor Degree	10.9%	19.7%
	Masters or Higher Degree	7.8%	9.3%
Male	<12 or 12, No H.S. Diploma	25.0%	23.1%
	H.S. Diploma/GED	25.9%	23.8%
	1-3 Years of College	26.1%	24.2%
	Bachelor Degree	12.8%	19.1%
	Masters or Higher Degree	10.3%	9.8%
Female	<12 or 12, No H.S. Diploma	25.5%	21.5%
	H.S. Diploma/GED	32.8%	22.2%
	1-3 Years of College	27.1%	27.2%
	Bachelor Degree	9.1%	20.3%
	Masters or Higher Degree	5.4%	8.8%

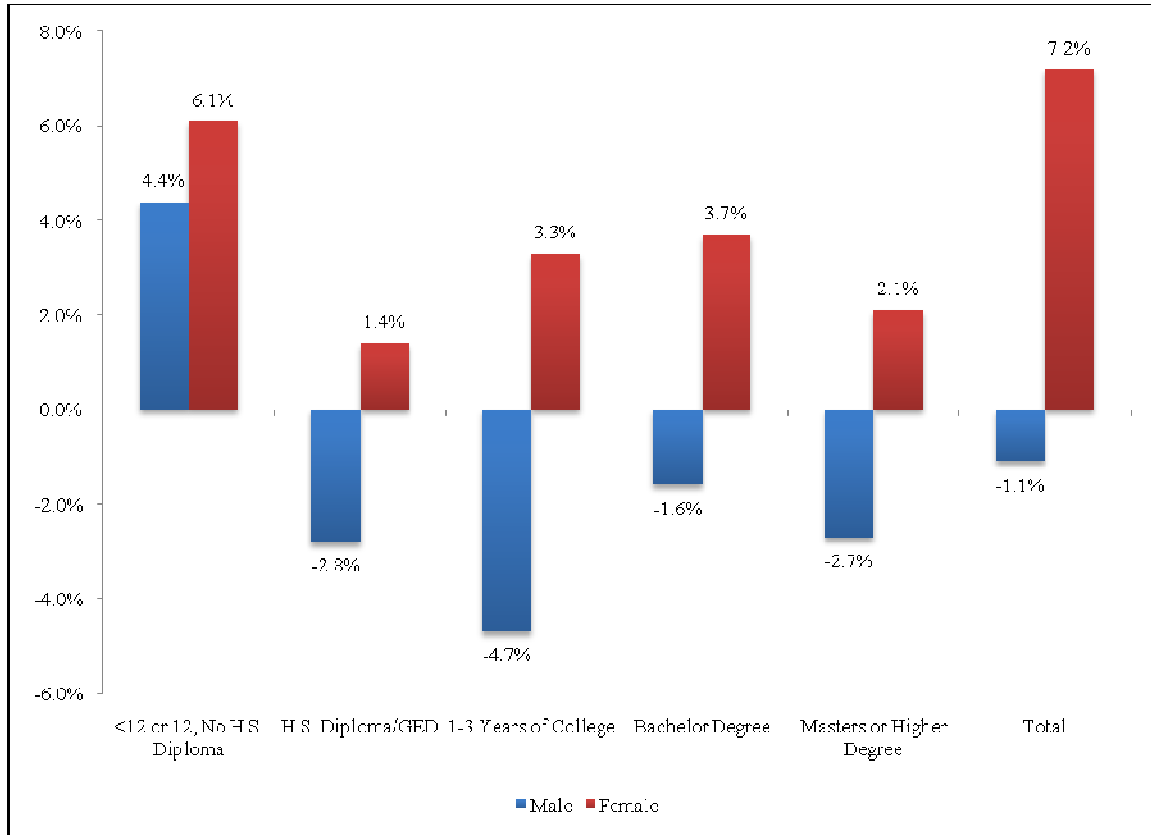
Appendix B: The Incidence of Work, Annual Hours of Work, and Hourly Rate of Pay among Non-Elderly Adults in the Los Angeles Metro Area, 1979 to the Present Day (2005-2007)

Table B1: Trends in the Expected Mean Annual Incidence of Work over the Year of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 1979 to the Present Day (2005-2007) (Excluding 18 to 22 Year Old Students)

Gender	Educational Attainment	1979	Present Day (2005-2007)	% Change, 1979 to Present Day (2005-2007)
All	<12 or 12, No H.S. Diploma	65.6%	70.0%	6.7%
	H.S. Diploma/GED	76.5%	77.6%	1.4%
	1-3 Years of College	83.6%	82.7%	-1.1%
	Bachelor Degree	87.4%	86.7%	-0.9%
	Masters or Higher Degree	91.9%	89.9%	-2.2%
	Total	78.0%	80.1%	2.7%
Male	<12 or 12, No H.S. Diploma	81.4%	85.0%	4.4%
	H.S. Diploma/GED	89.1%	86.7%	-2.8%
	1-3 Years of College	92.7%	88.4%	-4.7%
	Bachelor Degree	94.2%	92.7%	-1.6%
	Masters or Higher Degree	96.2%	93.5%	-2.7%
	Total	89.5%	88.5%	-1.1%
Female	<12 or 12, No H.S. Diploma	50.6%	53.7%	6.1%
	H.S. Diploma/GED	66.8%	67.7%	1.4%
	1-3 Years of College	75.0%	77.5%	3.3%
	Bachelor Degree	78.1%	81.0%	3.7%
	Masters or Higher Degree	84.0%	85.8%	2.1%
	Total	66.8%	71.6%	7.2%

Source: U.S. Bureau of the Census, 1980 Decennial Census, Public Use Micro Data Files, and American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

**Chart B1: Relative Change in the Work Rate of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 1979 to the Present Day (2005-2007)
(Excluding 18-22 Year Old Students)**



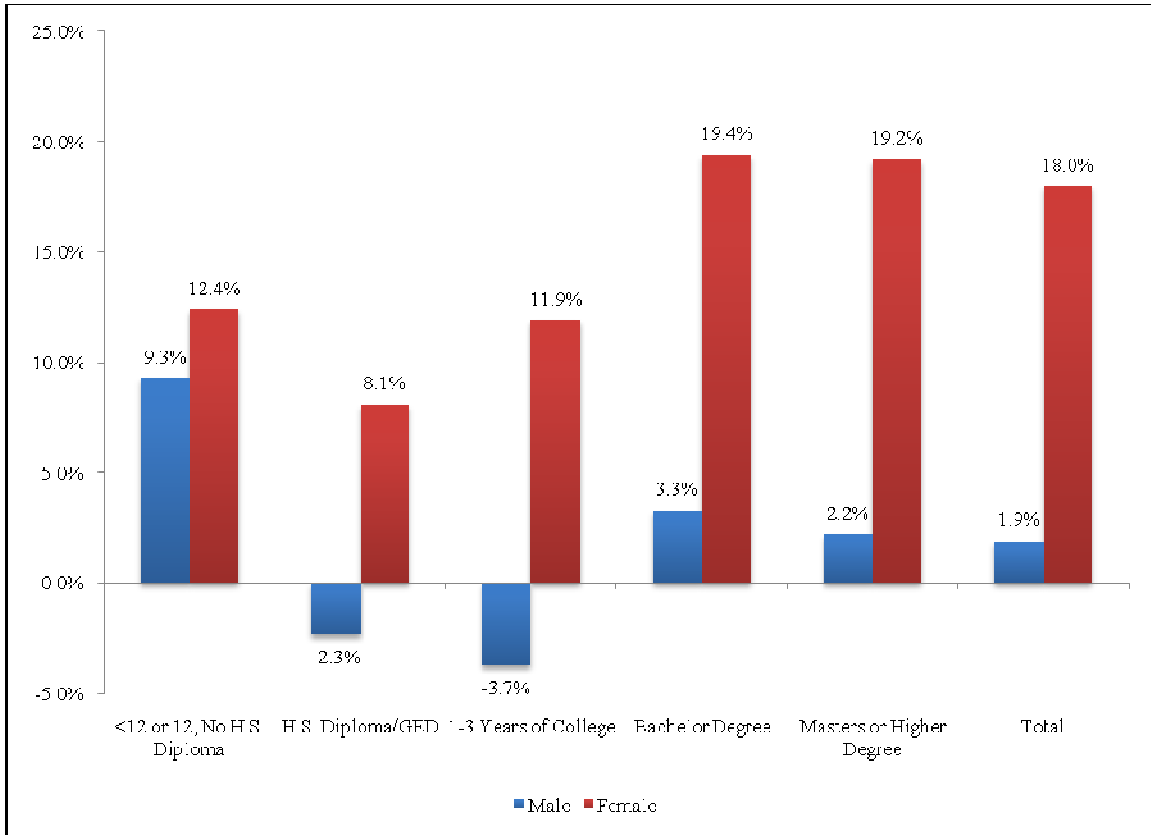
Source: U.S. Bureau of the Census, 1980 Decennial Census, Public Use Micro Data Files, and American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Table B2: Trends in Mean Annual Hours of Work over the Year of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 1979 to the Present Day (2005-2007), (Excluding 18 to 22 Year Old Students)

Gender	Educational Attainment	1979	Present Day (2005-2007)	% Change, 1979 to Present Day (2005-2007)
All	<12 or 12, No H.S. Diploma	1,108	1,249	12.7%
	H.S. Diploma/GED	1,348	1,426	5.8%
	1-3 Years of College	1,506	1,543	2.5%
	Bachelor Degree	1,598	1,690	5.8%
	Masters or Higher Degree	1,790	1,857	3.7%
	Total	1,391	1,508	8.4%
Male	<12 or 12, No H.S. Diploma	1,477	1,615	9.3%
	H.S. Diploma/GED	1,722	1,683	-2.3%
	1-3 Years of College	1,833	1,765	-3.7%
	Bachelor Degree	1,873	1,935	3.3%
	Masters or Higher Degree	2,028	2,072	2.2%
	Total	1,740	1,773	1.9%
Female	<12 or 12, No H.S. Diploma	756	850	12.4%
	H.S. Diploma/GED	1,061	1,147	8.1%
	1-3 Years of College	1,199	1,342	11.9%
	Bachelor Degree	1,220	1,457	19.4%
	Masters or Higher Degree	1,353	1,612	19.2%
	Total	1,051	1,240	18.0%

Source: U.S. Bureau of the Census, 1980 Decennial Census, Public Use Micro Data Files, and American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Chart B2: Relative Change in the Mean Annual Hours of Work of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 1979 to the Present Day (2005-2007) (Excluding 18 to 22 Year Old Students)



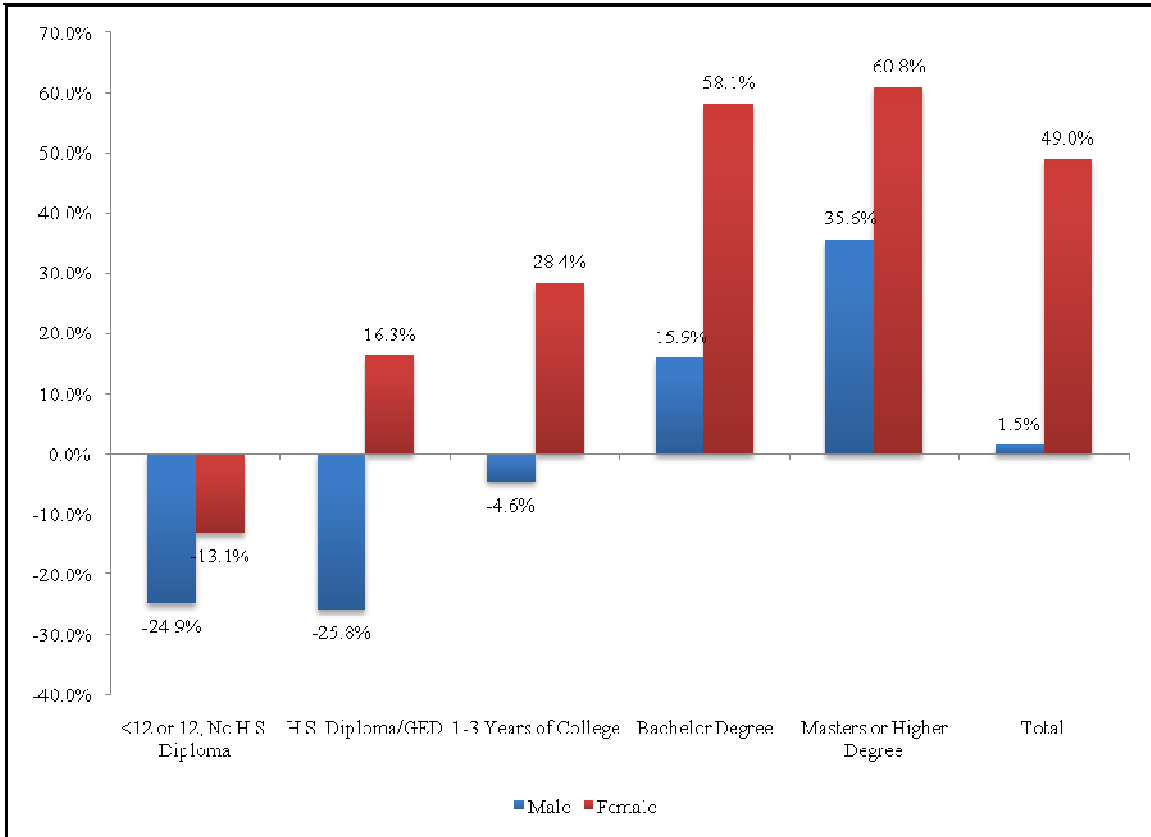
Source: U.S. Bureau of the Census, 1980 Decennial Census, Public Use Micro Data Files, and American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

Table B3: Trends in Mean Hourly Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 1979 to the Present Day (2005-2007)
(Excluding 18 to 22 Year Old Students)

Gender	Educational Attainment	1979	Present Day (2005-2007)	% Change, 1979 to Present Day (2005-2007)
All	<12 or 12, No H.S. Diploma	\$12.41	\$10.00	-19.4%
	H.S. Diploma/GED	\$16.48	\$15.30	-7.2%
	1-3 Years of College	\$21.21	\$22.91	8.0%
	Bachelor Degree	\$27.37	\$34.14	24.7%
	Masters or Higher Degree	\$35.91	\$49.60	38.1%
	Total	\$19.41	\$22.97	18.3%
Male	<12 or 12, No H.S. Diploma	\$17.30	\$12.99	-24.9%
	H.S. Diploma/GED	\$22.79	\$16.92	-25.8%
	1-3 Years of College	\$26.79	\$25.55	-4.6%
	Bachelor Degree	\$33.73	\$39.09	15.9%
	Masters or Higher Degree	\$40.93	\$55.52	35.6%
	Total	\$25.73	\$26.11	1.5%
Female	<12 or 12, No H.S. Diploma	\$7.74	\$6.73	-13.1%
	H.S. Diploma/GED	\$11.65	\$13.55	16.3%
	1-3 Years of College	\$15.98	\$20.52	28.4%
	Bachelor Degree	\$18.62	\$29.44	58.1%
	Masters or Higher Degree	\$26.67	\$42.89	60.8%
	Total	\$13.27	\$19.78	49.0%

Source: U.S. Bureau of the Census, 1980, Decennial Census, Public Use Micro Data Files, and American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University

**Chart B3: Relative Change in the Mean Hourly Earnings of the 18 to 64 year Old Civilian, Non-Institutional Population of the Los Angeles Metro Area, By Level of Educational Attainment and Gender, 1979 to the Present Day (2005-2007)
(Excluding 18 to 22 Year Old Students)**



Source: U.S. Bureau of the Census, 1980 Decennial Census, Public Use Micro Data Files, and American Community Survey, Public Use Micro Data Files, 2005-2007, Tabulations by the Center for Labor Market Studies, Northeastern University