



# Los Angeles American Indian and Alaska Native Project<sup>1</sup>

## Technical Memo 3: Working but Struggling

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### INTRODUCTION

This technical memo examines labor-market outcomes for American Indians and Alaska Natives (AIANs), particularly compared to non-Hispanic Whites (NHW) in Los Angeles County. The analysis uses data from the 2007–11 American Community Survey (ACS). Descriptions of this data source can be found in previous technical memos. When possible, the project utilizes tabulations published online by the Census Bureau (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>). That information is based on the full sample of respondents, which covers more than 12% of the population. The project also uses the 2007–2011 ACS public-use micro sample (PUMS), which contains individual level information for about 5% of the population. PUMS allows the project to customize the analysis to examine issues not adequately addressed by or reported in published statistics.

The rest of the memo is organized in four sections. The first provides an overview of the labor-market status of AIANs and other major groups. The second section compares annual earnings, both the averages and relative proportions at the bottom of the economic ladder. The third section analyzes the earnings gap between US-born non-Hispanic Whites and AIANs, and whether a gap between the two groups in income remains after accounting for human

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capital. The last section examines the paradoxical role of low educational attainment and high returns to schooling for AIANs.

The empirical findings show that AIANs are active in the labor market, but a disproportionately high number are struggling. They have a harder time finding work, earn less, and are more concentrated in the low-income sector. The results indicate that the economic disadvantages are due both to less education and labor-market barriers such as discrimination. On the other hand, the analysis reveals that AIANs experience considerable economic benefits from higher educational attainment.

### PART I: OVERVIEW OF LABOR MARKET STATUS

Table I summarizes the available information on the labor-market status of the 16 years and older population. Statistics are based on the categories used by the Census Bureau and reported for the major racial/ethnic groups and by sex. The figures for AIANs, Asians, and African Americans (aka “Blacks”) are based on the single race category (that is, the numbers do not include those who are multiracial), and the Hispanic category includes all Hispanics (aka “Latinos”) regardless of race. The NHW category includes those who are white alone and not of Hispanic origins. The analysis in this section uses three common indicators: the labor-force participation rate, the unemployment rate, and the full-time/full-year rate. The definitions are given below.

As with other studies of the economic effects of race, the NHW population is taken as the reference group because members of this population face fewer labor-market barriers than minority workers. Moreover, using this benchmark is desirable because NHWs and AIANs are predominantly US-born; thus they should be more comparable in the absence of barriers confronting AIANs. Being US-born, however, does not ensure equal outcomes, and this is apparent for African Americans. They have the same nativity characteristics as NH whites (mostly US-born), but Blacks have been extremely disadvantaged by past and current discrimination and institutionalized racism. Comparisons with Asians and Hispanics should be viewed cautiously because both groups are predominantly foreign-born. Their labor-market characteristics and dynamics are complicated by American immigration policies and practices that produce selective migration patterns. The

net results are a very highly educated Asian labor force and a far less educated Latino labor force. Moreover, linguistic and cultural factors affect the dynamics of economic incorporation and assimilation of foreign-born workers.

The analysis examines outcomes by sex because males and females have different relationships with paid work. Female participation tends to be lower and less continuous than male participation because a division of tasks still exists within a family or household. Women take on more of home duties such as childrearing, cleaning, and shopping. Females also encounter employment discrimination, which can have a noticeable effect on labor-market outcomes. The gender bias in the social division of household duties and overt sexism has waned, but neither has disappeared.

The broadest measure of the level of labor-market activity is the labor-force participation rate (LFPR), which is defined as the proportion of the 16 and older population that is either employed or actively seeking employment. This economically engaged segment of the population is categorized as being “in the labor force,” and the analysis focuses on the civilian sector (that is, excluding those in the armed forces when possible). AIAN LFPRs are roughly comparable to those for the total population and for NHWs, and this holds regardless of sex. (Not surprisingly, the LFPRs for females are consistently lower than for males.) In other words, the data show that AIANs are economically active.

Table I: Labor Market Status

	Total	NHWs	Asians	Blacks	AIANs	Hispanics
<b>Both Sexes, 16 &amp; older</b>						
Labor Force Participation	65.1%	64.5%	62.9%	60.7%	64.7%	67.2%
Unemployment Rate	9.8%	8.3%	7.5%	14.6%	12.0%	10.6%
FTFY Rate	61.2%	59.1%	64.9%	60.3%	58.6%	61.9%
<b>Male</b>						
Labor Force Participation	72.6%	71.3%	68.7%	61.7%	71.0%	77.0%
Unemployment Rate	9.8%	8.8%	8.0%	16.1%	11.2%	10.0%
FTFY Rate	66.1%	64.6%	69.0%	61.0%	63.7%	67.3%
<b>Female</b>						
Labor Force Participation	58.0%	57.7%	58.0%	59.8%	58.2%	57.6%
Unemployment Rate	9.8%	7.8%	7.2%	13.1%	12.8%	11.5%
FTFY Rate	55.4%	52.5%	60.8%	59.7%	51.9%	54.7%

FTFY refers to full-time, full-year work. Source: 2007–2011 ACS

Despite being active in the labor market, AIANs have a harder time finding work. This can be seen in the unemployment rate (UR), the percent of the civilian labor force that does not have a job (which is calculated by dividing the number of unemployed by the sum of the employed and unemployed). Nearly one in eight AIANs in the labor market is without a job, nearly one and a half times as prevalent as for NH whites. This disparity holds for both male and female AIANs. Moreover, the AIAN URs are higher than those for the total labor force, Asians, and Hispanics. Only Blacks have a higher unemployment rate. The statistics clearly show that AIANs are among the most disadvantaged in terms of encountering difficulties in finding work.

Along with higher unemployment rates, AIANs are less likely to work full time and full year (FTFY), which is defined as having worked at least 50 weeks in the previous year, averaging at least 35 hours per week. The FTFY rate is the FTFY workers as a percent of all who worked in the previous year. The AIAN LFPR is over three percentage points lower than the population (16 and older). In fact, the AIAN rate is lower than those for all other racial/ethnic groups. The gap is much larger among females.

## PART II: ANNUAL EARNINGS

AIANs are also disadvantaged in terms of annual earnings. Table 2 reports median annual earnings. The median is the amount that divides the working population so half earn more and half earn less. Earnings include both paid employment and income from self-employment, and the amounts are reported in 2011 dollars. The medians for both sexes combined (top third of the table) are estimated by the authors from categorical data. The typical (median)

AIAN worker earned 58¢ for every dollar earned by the typical NHW worker, an amazingly large disparity. The typical AIAN also earned less than the total working population, Asians, and African Americans. The disparity is slightly lower among FTFY workers but still substantial, with AIANs earning 60¢ for every dollar earned by the typical NHW worker, but the AIAN-NHW gap is larger among those working less than FTFY.

Table 2: Median Earnings in the Past 12 Months

	Total	NH Whites	Asians	Blacks	AIANs	Hispanics
<b>Both Sexes</b>						
Total	\$29,348	\$44,446	\$36,100	\$31,714	\$25,797	\$21,510
FTFY	\$41,334	\$63,157	\$48,052	\$44,190	\$38,000	\$29,255
Not FTFY	\$12,758	\$17,242	\$13,918	\$12,085	\$11,192	\$11,145
<b>Male</b>						
Total	\$31,972	\$52,719	\$39,795	\$32,459	\$27,446	\$23,892
FTFY	\$42,377	\$71,638	\$50,800	\$45,389	\$39,180	\$30,024
Not FTFY	\$14,218	\$20,086	\$14,973	\$12,479	\$11,735	\$12,489
<b>Female</b>						
Total	\$25,920	\$36,601	\$32,387	\$31,064	\$22,343	\$18,674
FTFY	\$39,399	\$54,029	\$44,989	\$42,975	\$36,321	\$27,381
Not FTFY	\$11,749	\$15,626	\$13,077	\$11,738	\$10,641	\$9,984

Source: 2007–2011 ACS.

The AIAN-NHW gap is larger among males (the relative difference in the median for NHW males and AIAN males) than among females (the relative difference in the median for NHW females and AIAN females). The latter phenomenon (smaller gap among females) is due in part to the fact that NHW females earn considerably less than their male counterparts (NHW males). Nonetheless, the data indicate that AIAN females earn less because of their race and gender.

As a consequence of earning less, AIANs are more concentrated in the lower economic rungs, which can be seen in table 3. The top half of the table reports the percent of each group falling into two low-income categories, those earning less than \$10,000 and those earning between \$10,000 and \$19,999. Among all workers (both FTFY and non-FTFY), AIANs have the highest odds of being in the lowest category, with nearly one in five earning less than \$10,000. AIANs are also more likely to be in the next income category relative to all workers, NH whites, Asians, and African Americans. In other words,

AIANs are disproportionately more likely to be low-income workers, to be among the “working poor.”

An alternative measure of the economic status of workers is the economic well-being of their families. Data on individual earners do not capture the complexity of families. The same income has very different consequences on the quality of life for a small family than for a large family. The alternative approach is to classify workers according to the federal poverty line (FPL), which is based on approximately three times the cost of the typical food basket for a family according to size. For the 48 states on the mainland, the 2001 FPL ranges from \$11,484 for a single person to \$23,021 for a family of four and to \$39,069 for a family of eight. There are slight adjustments to the FPL depending on whether the head is elderly or not and on the ratio of adults to children.

Table 3: Employed by Earnings and Poverty Categories

	Total	NHWs	Asians	Blacks	AIANs	Hispanics
<b>By Annual Earnings</b>						
All Employed						
\$9,999 or Less	17.1%	15.0%	14.9%	18.3%	20.2%	18.9%
\$10,000 to \$19,999	18.8%	10.8%	13.6%	14.6%	19.8%	27.2%
<b>FTFY Employed</b>						
\$9,999 or Less	2.2%	1.5%	1.8%	1.9%	3.5%	2.8%
\$10,000 to \$19,999	15.2%	5.1%	9.1%	9.5%	13.6%	25.5%
<b>By Poverty Status</b>						
All Employed						
Less Than 1.5x FPL	16.9%	8.4%	11.0%	16.7%	19.3%	25.1%
1.5-2.49x FPL	18.2%	9.3%	14.2%	16.7%	22.0%	26.3%
<b>FTFY Employed</b>						
Less Than 1.5x FPL	11.4%	3.1%	5.6%	7.7%	9.3%	20.1%
1.5-2.49x FPL	17.4%	7.1%	12.8%	15.2%	20.0%	26.7%

Source: Annual Earnings Statistics from published 2007–2011 ACS information, workers by poverty status based on tabulations of 2007–2011 ACS PUMS data by authors

One of the limitations of the FPL is that thresholds are not adjusted for geographic location despite the fact that the cost of living in large urban areas, such as Los Angeles, is considerably higher than in other regions. For this reason, the project classifies families with less than one and a half times the FPL as being poor. Families in the range of 1.5 times and 2.49 times the FPL are classified as being lower-income. The percentages in the second half of table 3 are based on these definitions, and the statistics are based on tabulations of PUMS data by the authors.

The empirical results show that nearly one in five AIAN workers lives in a poor family, a proportion higher than all other groups except Hispanics. Another one in five AIAN

workers lives in a lower-income family, again a rate higher than all other groups except Hispanics. In other words, AIANs are disproportionately over-concentrated among the poor and those with limited income. Working FTFY lowers the percentages, but does not change the relative positions of racial/ethnic groups. AIAN FTFY workers are more likely to be at the bottom end of the economic ladder relative to NH whites, Asians, and Blacks.

The findings in this section show that too many AIANs are financially struggling, working but unable to earn enough to lift their families into the middle class. Although the consequences of lower earnings are obvious, the causes are more difficult to determine.

### PART III: THE AIAN-NHW EARNINGS GAP

This section of the technical memo provides additional insights into the earnings gap between AIAN and NHW workers reported earlier. While the observed disparity is sizable, it could be due to a number of factors. The main objective of the analysis is to test whether being AIAN has an adverse effect on outcomes after accounting for economic factors that normally determine earnings. According to mainstream labor economics and assuming a competitive labor market, human capital is the key to productivity and compensation to labor. Human capital comes in two forms, through formal schooling (education) and from on-the-job training (OJT, both general and firm-specific).

Markets, however, may not be perfectly competitive. For example, minorities and women may be treated less favorably than NH white males in terms of recruitment, screening, hiring, access to OJT, retention, and promotion. These practices are usually seen as discrimination, which can be either overt or subtle. The latter form is associated with unconscious prejudices, prevailing stereotypes (which can have a statistical foundation but are generalized to all members of a group, a phenomenon known as statistical discrimination), and differential access to social networks. Labor markets also are affected by the business cycle, so outcomes vary from year to year.

The analytical challenge is to empirically isolate the contributions of human-capital factors from other factors. The analysis uses the following modified multivariate

human-capital model to conduct the analysis, and the model’s specification is based on the available data, which is discussed later.

$$E_j = \alpha + \beta(E_{d_j}) + \gamma(Exp_j) + \lambda(Yr_j) + \varphi(G_j) + \sigma_j, \text{ for workers } j=1 \dots m$$

$E_j$  is the dependent (outcome) variable defined as the log of annual earnings for worker “j.” The other variables are the

independent (or causal) variables, which are hypothesized to influence the level of earnings:

$E_{d_j}$  is the number of years of schooling

$Exp_j$  is the potential number of years of work experience

$Yr_j$  is a vector of dummy variables denoting the year of the survey

$G_j$  is a vector of dummy variables denoting race-sex groups other than NH white

The following are parameters that are statistically estimated:

$\alpha$  is a constant (intersect)

$\beta$  and  $\gamma$  are coefficients relating schooling and experience to  $E_j$

$\lambda$  and  $\varphi$  are vectors of coefficients relating years and groups to  $E_j$

Finally,  $\sigma_j$  is the random error for observation “j,” the unexplained variance not captured by the included independent variables. This model assumes that the economic returns to education and experience are the same for all groups. This assumption is relaxed in the subsequent section of the technical memo.

Weighted ordinary least-square regressions are used to estimate the coefficients ( $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\lambda$  and  $\varphi$ ) for the independent variables. The weight is the probability of being included in the survey. A coefficient is interpreted as the impact of increasing the value of the associated independent variable on earnings. For example, one more year of schooling ( $\Delta Ed=1$ ) would increase earnings by a factor related to  $\beta$ . Most studies show that getting one additional year of education increases annual earnings by more than a tenth. The primary independent variables of interest are those for groups other than NHW males, the reference category. If an observed inter-group difference (e.g., the earnings gap between NHW males and AIAN males) is due just to variations in years of schooling and experience, then the estimated value of  $\varphi$  should be statistically no different than zero. This would imply that there is no additional burden or economic cost of being AIAN in the labor market other than the influence of differences in human capital. However, if  $\varphi$  is negative and statistically significant, then the finding means that the earnings gap between the two groups cannot be explained away because of differences in education and experience.

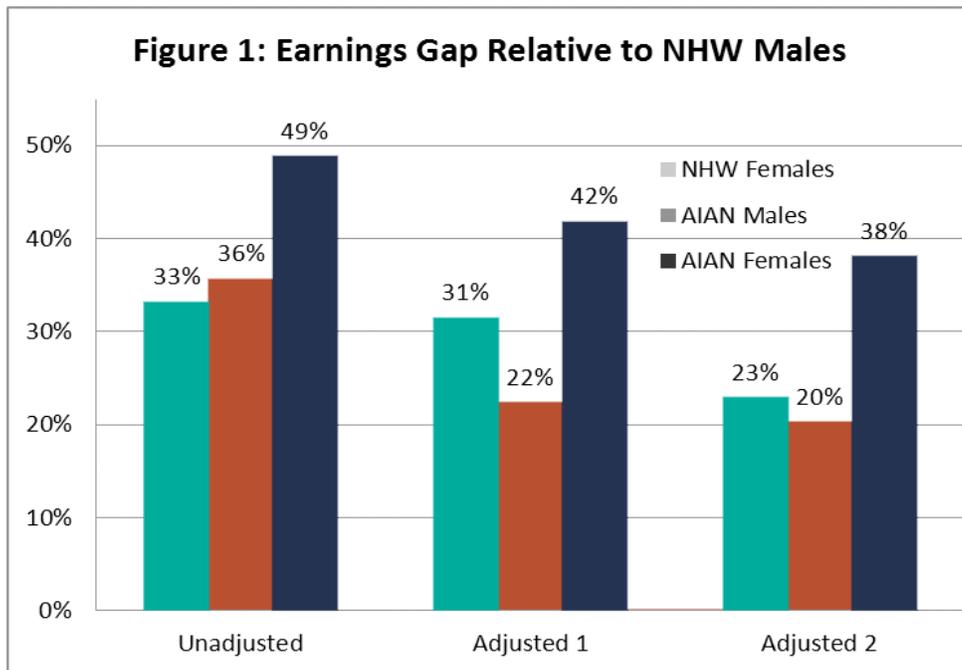
The data come from the 2007–2011 PUMS. Schooling is based on the highest year of education completed. Other variables are calculated from available information. For example, there are no reported data on years worked; therefore, the value for the potential years of work experience is calculated as age minus the years of schooling minus 5 years. The empirical model also uses the square value of the potential years of experience because the economic return to OJT declines with fewer years of work before retirement. The vector of years is included because the ACS data are based on responses over five years, thus labor-market outcomes were affected as the economy entered into the “great recession.” (See previous technical memo for details on the business cycle.) The vector of groups includes NHW females, AIAN males, and AIAN females. The excluded (reference) group is NHW males.

The subsample from PUMS includes AIAN and NHW workers with reported earnings in the previous year who are at least 16 years old, US-born, and not currently enrolled in school. Immigrants are not included to simplify the analysis because modeling the process of economic assimilation is complex and beyond the scope of the project. Moreover, the sample of AIAN immigrants is too small for any detailed analysis.

Figure 1 summarizes the key regression results, all of which are statistically significant. The height of the bars represents the estimated earnings gap between a group (NHW females, AIAN males, or AIAN females), and NHW males. The first series (leftmost three bars) reports the unadjusted gaps, that is, the differences controlling only for the year of survey but not controlling for schooling and experience. (The estimated gaps are different than those reported in Part II because of differences in the included populations and methodologies to calculate the disparities.)

The gaps are sizable, particularly for AIAN females. The second set of bars (middle three) reports the gaps after accounting for human capital factors and year of survey. The gaps do decrease, indicating that some of the earnings gap is due to variations in education and experience. For example, the disparity between AIAN males and NHW males drops by more than a third. Nonetheless, there are still sizable residual differences, indicating that nonhuman capital factors contribute significantly to disadvantaging the

three groups. AIAN males earned about 22% less, and AIAN females earned 42% less. The final set of bars (rightmost) contains the results for an alternative model that includes being FTFY as an additional control (independent) variable. This modification lowers the gaps but only marginally for AIAN males and AIAN females. Rerunning separate regressions for males and females produces similar results in terms of the NHW-AIAN gap within each group by sex.



Estimates by authors based on analysis of 2007–2011 ACS PUMA

The sizable estimated impact of just being AIAN on earnings, after accounting for human capital, indicates that AIAN workers face enormous difficulties in making a decent income. This is commonly interpreted as the unexplained or unjustified economic cost of being AIAN in the labor market. As mentioned earlier, poor labor-market outcome could be partially due to employment discrimination. The gap may also be due to unobserved differences in the quality of schooling; that is, AIANS may have had an inferior education for any given level of

attainment relative to NHW males. This type of inequality can be considered to be a form of pre-labor-market discrimination or institutionalized racism. Unfortunately, ACS does not collect information on employment discrimination or the quality of education. Despite this data limitation, the findings nonetheless reveal that AIANS are encountering formidable hurdles that contribute to lower income for AIAN workers and the disproportionate concentration of AIANS among the working poor.

## PART IV: EDUCATION

Improving education opportunities is one potential strategy to improving the labor-market outcome for AIANs. AIANs have lower educational attainment than NH whites, which is detailed below. Simulations based on the estimated econometric model in the previous section indicate that closing the education gap between NH whites and AIANs

would cut the earnings gap in half. While increasing schooling for AIANs is not a panacea because there are still other employment barriers, promoting education could nonetheless greatly improve the economic well-being of AIANs and their families.

Table 4: Educational Attainment, 25 and Older

	Total	NH Whites	Asians	Blacks	AIANs	Hispanics
All						
Less than High School	23.9%	6.7%	13.1%	12.6%	28.9%	45.0%
High School or GED	20.8%	18.2%	15.1%	24.6%	23.5%	24.4%
Some College or AA	26.0%	30.1%	22.6%	39.9%	32.2%	20.6%
BA/BS Plus	29.2%	45.0%	49.2%	22.8%	15.4%	10.0%
Male						
Less than High School	23.8%	6.4%	10.8%	13.8%	29.2%	45.4%
High School or GED	21.0%	17.1%	14.5%	26.9%	23.7%	25.4%
Some College or AA	25.2%	28.9%	23.6%	37.3%	31.2%	19.9%
BA/BS Plus	29.9%	47.6%	51.1%	22.0%	16.0%	9.3%
Female:						
Less than High School	24.0%	7.0%	15.0%	11.7%	28.7%	44.7%
High School or GED	20.7%	19.3%	15.6%	22.7%	23.2%	23.4%
Some College or AA	26.9%	31.4%	21.8%	42.1%	33.2%	21.3%
BA/BS Plus	28.5%	42.4%	47.7%	23.4%	14.9%	10.6%

Source: 2007–2011 ACS

The statistics in table 4 show the degree of disparity in educational attainment among the major racial/ethnic groups. The figures are based on the adult population that is at least 25 years old, including those in and outside the labor force. Hispanics have the lowest educational attainment because of the large number of Latino immigrants who received very limited schooling prior to entering the United States. AIANs are more concentrated at the bottom end (those who did not complete high school) and less likely to have a four-year college degree than the total population, NH Whites, Asians, and Blacks. This educational disparity holds for both males and females. Compared with NH Whites, AIANs are about four times as likely to not have a high school degree (or its equivalent such as a GED), and only a third as likely to have a bachelor’s degree.

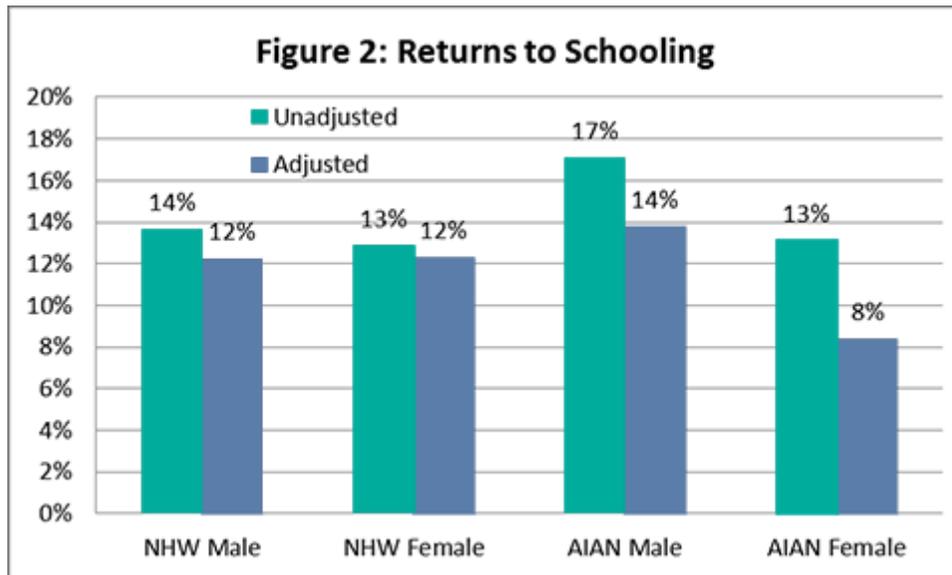
Although AIANs with the same level of education earn less than their NHW counterparts, important questions are whether there are economic benefits to schooling

among AIANs and, if so, how much. More specifically, what is the increase in earnings from an additional year of education for AIANs, or worded slightly differently, what is the difference in earnings between AIANs with more education compared to those with less education? The human-capital regression model used in the previous section assumes that the rate of return to education is identical for everyone in the sample. More specifically and on the average, there is, on the average, an estimated 12% increase in earnings for every additional year of schooling. This assumption of equal rates of return can be relaxed by estimating separate regression models for each of the four race-sex groups (NHW males, NHW females, AIAN males, and AIAN females), thus generating separate estimated rates of return.

Figure 2 reports the key results from the race/sex-specific empirical models. The green bars report the estimated rates of return to schooling after accounting for the year

of the survey. The reported percentages are the estimated increases in earnings from one more year of education, and they indicate that the rates for AIANs are at least as large as those for NH whites. The blue bars report the estimated returns from models that account for experience, survey year, and being FTFY. These additional controls lower the estimated effects of education, but there are still substantial benefits from schooling, particularly for AIAN males. The noticeable drop for AIAN females is due to a strong correlation between educational attainment and the odds of working full-time and full-year. Adjusting for that association generates an approximate 12% rate for return for AIAN females.

Improving educational attainment is not sufficient to eliminating the poor labor-market outcomes for AIANs, but it is probably a necessary element of a multi-pronged strategy. Moreover, addressing the problem through the lens of schools enables AIANs to tackle an issue through public policy since education is a public good. Moreover, there is broad support for the proposition that all children should have a decent education.



## CONCLUSION AND RECOMMENDATIONS

This technical memo reports the results from an analysis of 2007–2011 ACS data to document the labor-market status and outcomes for American Indians and Alaska Natives in Los Angeles. The project examines standard economic indicators and utilizes statistical techniques to generate additional insights. The major findings are:

1. AIANs are economically active in the labor market.
2. AIANs have more difficulties finding jobs and working full-time/full-year.
3. AIANs suffer from an earning gap relative to NH Whites.
4. Lower earnings push a disproportionate number of AIANs into the working-poor class.
5. Differences in the stock of human capital explain some of the NHW-AIAN earnings gap;
6. There is a sizable “cost of being AIAN” beyond differences in human capital.
7. Closing the educational gap can ameliorate negative labor-market outcomes.

The analytical findings point to the following recommendations:

1. additional research to identify the exact nature of the labor-market barriers facing AIANs;
2. greater enforcement of antidiscrimination laws to protect AIAN workers; and
3. increase educational attainment opportunities for AIANs.

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