Working Paper No. 2018-03

Returns to Higher Education for American Indian and Alaskan Native Students

Caitlyn Keo

Amy Peterson

Kristine West

St. Catherine University, St. Paul, Minn.

April 2018

This page is intentionally left blank for pagination purposes.

Returns to Higher Education for American Indian and Alaskan Native Students

Caitlyn Keo, Amy Peterson, and Kristine West*
April 2018

Abstract: Policies aimed at increasing higher education attainment are central to efforts aimed at eliminating racial gaps in earnings, employment and labor force participation (LFP). We use data from the American Community Survey (ACS) spanning 2008-2016 to investigate the returns to higher education by racial groups with particular attention to the returns realized by American Indian and Alaskan natives (AIAN). First, we find that there are sizable gaps in earnings, employment, and LFP. On average AIAN earn 15 percent less, have 6.2 percentage point lower employment rates, and 10.0 percentage point lower LFP rates than white Americans even after controlling for differences in education and experience. Next, while all workers experience sizable returns to education, the returns to education are different by racial group. We find that AIAN college graduates reap larger returns in terms of LFP and employment but experience smaller gains in earnings than otherwise similar white college graduates. These results suggest that policies promoting higher education are necessary but not sufficient to address white-AIAN labor market disparities. We simulate LFP, employment and earnings under the hypothetical case in which the distribution of AIAN higher education increases to match that of whites and estimate that, even under this very optimistic scenario, white-AIAN labor market disparities would remain stark.

Note: The views here are those of the authors and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.

*Corresponding author. Contact information: klwest@stkate.edu.

Please do not cite without permission.

1. Introduction

There is clear evidence that a bachelor's degree increases employment rates and average earnings (e.g., James 2012, Abel and Dietz 2014).[1] There is mixed evidence, however, on if and how the returns to postsecondary education vary by race (Cooper and Cohn 1997, Monks 2000, Perna 2005, Gaddis 2014). We add to this literature and find that the returns to higher education are larger for whites than for other racial groups. This is troubling for a range of reasons. It means that higher education may exacerbate rather than alleviate racial disparities, which is problematic both ethically and economically. Ethically, higher education, particularly at publicly supported institutions, should not yield systemically different results by race. Economically, disparities indicate untapped opportunities for growth, and low returns to college can dampen the incentive to pursue higher education and make it harder for nonwhite students to repay student loan debt. A fuller and more detailed understanding of how returns to education differ by race will improve policies intended to address these ethical and economic concerns.

Previous research on differences in the returns to college has focused largely on black-white earnings and employment gaps. We extend the analysis to focus on American Indian and Alaskan Natives (AIAN), a group that is often lumped in with "other" when disaggregating by race. Using data from the American Community Survey (ACS) from 2008-2016 that includes detailed measures of racial identity, we pursue a simple research question: Are returns to postsecondary education different for AIAN than for other racial groups? Notably, our identification strategy stops short of allowing for causal identification of the returns to education because we are unable to deal with selection bias. Since we are interested in relative statements, however, we argue that our methodology is robust, conditional on the assumption that the selection bias is similar across racial groups.

We find that the increases in labor force participation and employment associated with a bachelor's degree or higher (BA+) are 5.9 and 5.04 percentage points *more* for AIAN than for whites. The earnings premium associated with a BA+, however, is 8.04 percent *less* for AIAN than for whites. These findings have important implications. They suggest that interventions aimed at improving college attendance and completion may have larger labor force participation and employment effects but smaller earnings effects for AIAN Americans than for other groups.

We use our estimates to simulate the impact of a hypothetical policy that increases AIAN college-going and completion rates to match those of whites to show that policies that increase college going are necessary but not sufficient to close white-AIAN labor market gaps. In our simulation we estimate that a

---

[1] In our estimates, we find that, on average across all groups, a BA increases the odds of employment by 7.6 percentage points and earnings by 60 percent. These magnitudes are consistent with previous research.

hypothetical intervention that fully addressed white-AIAN disparities in higher education would leave white-AIAN labor market disparities largely unresolved. In other words, interventions that reduce racial gaps in access, persistence, and completion in higher education are necessary but far from sufficient. These results serve as a reminder that interventions will not have their full impact unless coupled with other policies that attack the remaining sources of inequality, including the legacy of unequal family resources and systemic and institutional discrimination.

2. Previous Literature

There is a rich body of research in labor economics on both racial disparities (e.g., Heckman 1998, Bertrand and Mullainathan 2004, Carneiro and Heckman 2005) and the returns to education (e.g., Card and Krueger 1992, Harmon and Oosterbeek 2003, Psacharopoulos and Patrinos 2004 and Carneiro, Heckman, and Vytlacil 2011). More often than not, in this research AIAN are tallied in the "other" racial category due to small sample sizes, but there are a handful of studies that focus on AIAN outcomes. Kimmel (1997) compares earnings for American Indian (AI), white, and black respondents in the 1987 National Medical Expenditures Survey with a particular focus on rural locations. Kimmel finds that for men, only 14 percent of the AI-white earnings gap is unexplained by observable demographic and job characteristics. For women, however, 66 percent of the AI-white earnings gap remains unexplained. Further, she concludes that in rural areas AI and white workers both experience very small returns to education relative to white workers in urban settings.[2] Gitter and Reagan (2002) find that living on or near a reservation is negatively correlated with labor market outcomes for AI men. Among AI men, those who reside in a county with a reservation are 11 to 14 percentage points less likely to be employed than those who reside elsewhere. Moreover, AI men who lived in a county with a reservation at age 14 are 5 to 10 percentage points less likely to be employed than counterparts from a nationally representative cross section of the same birth cohort.

More recently, Austin (2013) uses ACS data from 2009-2011 to investigate the employment gap between AI and white workers. Specifically, he measures the difference in the odds of employment conditional on demographic covariates and finds that the employment rate for prime age AI workers is 64.7 percent, a full 13.4 percentage points lower than prime age white workers. He concludes that postsecondary education is the factor most likely to increase the odds of securing employment for AI

---

[2] Kimmel's estimates depend on a sample of 975 AI males (599 employed) and 1,146 AI females (550 employed). Our analysis provides updated estimates using a much larger data source. Her identification strategy is a two-step Heckman correction with household size and marital status to control for selection into work. The observable personal and job characteristics are age, education, an indicator for more than one year out of the labor force, firm size, union status, occupation, and the share of white males in the occupation.

workers, finding that AI with advanced degrees (greater than a BA) are seven times as likely to be employed as AI with less than a high school diploma. He does not, however, offer evidence on whether postsecondary education is any more or less important for AI workers than it is for white workers. Lastly, he finds that South Dakota, North Dakota, Iowa, Minnesota, Wisconsin, and Montana have the largest AI-white employment gaps and that the Tingit-Haida (Alaska), Aleut (Alaska), Cherokee (Okla.), Choctaw (Okla.) have significantly higher employment rates than other tribes after controlling for demographics such as gender, age, and marital status. This points to the diversity of AI experiences and possibly policy lessons from specific tribal settings.

There is also recent evidence that AIAN workers experience nontrivial occupational sorting. Wise, Liebler, and Todd (2017) find that AIAN workers are overrepresented in low-skill occupations and underrepresented in high-skill occupations relative to non-Hispanic white workers. Gaps in educational attainment explain some but not all of this sorting. Wise et al. find that this occupational dissimilarity is persistent across education levels and is stronger for men than women. Further they find no evidence of changes over time.

A large body of research describes the historic and current socioeconomic context for AIAN students in higher education (e.g. Cunningham 2007 and Brayboy, Solyom, and Castagno 2015). Among American racial, ethnic, and cultural groups, AIAN tribes are distinctive for their political recognition as domestic sovereign nations. AIAN higher education is unique, in part, because there are treaty agreements governing the federal government's responsibility toward tribal nations. As a result, the federal government helps support the network of tribal colleges and universities (TCUs) that serve predominaantly AIAN students. While it is important to interpret our findings in this larger historical and socio-economic setting, we are unable to directly address much of this crucial context because we are limited to the variables collected in the ACS. For example, we do not know which students attend TCUs.

3. Data and method

To estimate returns to higher education for AIAN and other racial groups, we use data from the American Community Survey (ACS) spanning 2008-2016.[3] The ACS surveys are annual weighted samples of 1percent of the U.S. population. All analyses make use of the sampling weights provided, yielding a nationally representative sample. Since 2005 these surveys have offered improved options for self-identification, tribal selections, and homeland designations. These improvements enable us to provide an updated and nuanced study of the returns to education for AIAN workers.

---

[3] Accessed from the Integrated Public Use Microdata Series, IPUMS (Ruggles et al. 2015).

Our final analytic sample of prime aged workers (ages 25-55) includes 209,955 respondents who identify as AIAN and 10,889,055 non-AIAN respondents. Following Wise, Liebler, and Todd (2017), we separate AIAN respondents into mutually exclusive subgroups: those who identify as AIAN only (n=100,440), those who identify as AIAN and at least one other race (n=75,548), and those who identify as AIAN and Hispanic (n=33,967).[4] Table 1 shows the sample size for each of these subgroups and other racial/ethnic categories by level of education.[5] Table 1 reveals that, among prime-aged workers, AIAN complete associate degrees at similar rates to whites and are even more likely than whites to have some college (but no degree). In contrast, AIAN lag significantly behind whites in the BA+ category. Indeed, among all of the racial/ethnic categories the AIAN-only population has the lowest percentage of workers with a BA or higher.

The main empirical strategy is an earnings equation in the style of Mincer (Mincer 1974, Heckman, Lochner, and Todd 2006). Specifically, we use ordinary least squares estimates of:

$$y_{itso} = \alpha + \beta_j Educ_{ij} + \gamma Exp_i + \delta_h Race_{ih} + \vartheta_j Educ_{ij} * Race_i + \theta_k X_{ik} + \rho_t + \tau_s + \varphi_o + \varepsilon_{itso} \qquad (eq\ 1)$$

where y is a labor market outcome for person i in time t and state s. We use three different labor market outcomes: labor force participation (LFP), employment, and log earnings. Earnings are measured as total pretax wage and salary income for the year prior to the surveyed year. This includes wages, salaries, commissions, cash bonuses, tips, and other monetary income from the individual's employer. Earnings do not include income from business, farm, self-employment, social security, public assistance, or other income that has not been earned from an employer.[6]

Educ measures j categories of education beyond high school in the form of indicator variables for some college (but no degree), an associate degree, a bachelor's degree, or higher (i.e. a master's, professional or doctoral degree).[7] *Exp* is a linear and a quadratic of potential experience (age minus years of schooling minus six) and *Race* is a vector, indexed by h, including, but not limited to, AIAN alone and AIAN in combination with another race and AIAN in combination with Hispanic. The omitted racial category is non-Hispanic white; thus the β coefficient measures the return to a degree for white workers and the ϑ coefficients on the interaction of education and race measure the marginal return to education

---

[4] As the results will make clear, we see evidence that AIAN-Hispanic experience very different labor market outcomes. In the current study we focus on results for AIAN alone and leave a fuller examination of the results for AIAN and at least one other race and AIAN and Hispanic for future research.

[5] We group respondents who are Hispanic (and not AIAN) so that we have mutually exclusive groups.

[6] Results are robust to a more inclusive definition of income (available upon request).

[7] In this specification, the omitted category includes both high school graduates and those without a high school diploma. The results are robust to including an indicator for high school graduation. This vector includes both exogenous characteristics like age and sex as well as endogenous characteristics that are influenced by the decision to pursue higher education. We do not find that separating these out influences results.

for each nonwhite group. *X* is a vector of k demographic controls listed in Table 2, and ρ and τ are time (year) and state fixed effects.

This identification strategy has some limitations. It is unable to address the selection bias inherent in postsecondary educational attainment. Students decide whether or not to pursue education in part based on their own assessment of their abilities and likelihood of increased earnings and employment. Further, they pursue education knowing their own preferences about labor force participation. There is a large body of labor economic theory on how to address this problem (e.g., Angrist and Krueger 1999), but none are particularly well suited for our data. Instead, we use the simple cross-sectional estimates and note the caveat that the results stop short of causal identification. Importantly, however, our focus is not as much on the returns to postsecondary education as on the *relative* returns to postsecondary education across racial groups. The key assumption is that the selection bias works similarly for AIAN and white students (and/or students from other racial groups). It is possible that the utility functions, the constraints, and the parameters that measure selection into postsecondary education are fundamentally different for AIAN students than for white students.[8] Since we cannot rule out differential selection, we caution the reader against strong causal statements and encourage the reader to consider this rigorous descriptive analysis.

Lastly, the sample restrictions vary somewhat depending on the dependent variable. For all analyses we focus on prime-age workers, i.e., people aged 25-55. When we use LFP as the dependent variable, this is the only sample restriction. When we use employment status as the dependent variable, the sample includes only respondents who are in the labor force and, when we use earnings as the dependent variable, the sample includes only respondents who are employed. Additionally, when we look at earnings we exclude part-time workers (<35 for usual hours of work per week) but we find that including part-time workers does not substantively change our findings.[9] Additionally, we adjust earnings for inflation using the CPI. After adjusting for inflation, we use only workers who earn at least $10,000 in USD2014.

Table 2 provides summary statistics for the analytic sample. The first column reports on the entire analytic sample (including AIAN respondents) and the second column includes only AIAN respondents (including AIAN alone, AIAN in combination, and AIAN and Hispanic). Looking first at the outcome variables, we see that AIAN have lower LFP and employment rates than the general population. Further, average earnings are $51,384 for the entire sample (10.40 in log form) but only $36,707 for AIAN (10.04

---

[8] Neal and Johnson (1996) argue that estimates of the black-white earnings gap may be biased by the fact that black students pursue education at different rates due to their assessment of future labor market discrimination. This logic could extend to AIAN students and would be an example of a reason to worry about differential selection bias across racial groups. Additionally, we have heard anecdotal evidence that AIAN women may have different life-cycle patterns with regard to timing of career/school and family/fertility, which could also lead to systematically different human capital accumulation.

[9] Results including part-time workers are not shown but are available upon request.

in log form). It is also the case that AIAN differ from the general population on a range of potentially important demographic and geographic variables. For instance, among prime-age workers, AIAN are less likely to be married and have children and are more likely to be military veterans. Geographically, AIAN are overrepresented in the West and in rural areas. Almost half of the AIAN in the sample live in a public-use microdata area (PUMA) that includes a reservation compared to less than 17 percent of the general population. Our preferred specification controls for these variables and thus isolates the disparities that remain after accounting for observable demographic and geographic differences.

4. Results

First, we report the results of our estimates of equation (1) using earnings as the dependent variable. Then we turn to employment and LFP. In each section we demonstrate how the returns to postsecondary education, i.e., β_1 and β_2, change as we introduce additional control variables. We report results both with and without demographic and geographic controls because many of the control variables are endogenous to decisions about work. We also report results by subgroups, focusing on how our estimates vary by gender, urban/rural residence, and residence in PUMAs on or near a reservation.

4.1 Earnings:

Table 3A reports results using the natural log of earnings as the outcome variable; thus, coefficients should be interpreted as percent differences relative to the omitted category. Column (1) shows the average earnings differences between racial groups where the only controls included are state and year fixed effects. Workers who identify as AIAN alone earn, on average, 23.6 percent less than workers who identify as white (the omitted category) in the same state and year. This is a naïve analysis, however, since workers vary on other dimensions related to earnings. In column (2) we add controls for education and experience. Consistent with previous research, we find that the earnings increases associated with experience are positive and diminishing (i.e., the linear term is positive but the squared term is negative). We find that workers with some college (but no degree) earn, on average, 17.8 percent more than workers with no college course work. Workers with a BA+ earn 60.1 percent more. It is worth noting again that our methodology does not correct for selection, and workers who choose to pursue postsecondary education are likely different from those with no college course work. Accordingly, we cannot attribute the earnings increases to education alone. Still, consistent with other work on the returns to degrees, there appears to be a substantial earnings premium associated with postsecondary education. In what follows, we refer to this as "returns to education" for ease of exposition.

Adding controls for education and experience explains some, but not all, of the difference in earnings between AIAN and white workers. After controlling for educational attainment and potential experience, workers who identify as AIAN alone earn, on average, 15.1 percent less than workers who identify as white. This is still a striking earnings gap. AIAN who identify as multirace experience smaller earnings gap, making 11.5 percent less than white workers after accounting for education and experience. Before adjusting for education and experience, the white-AIAN earnings gap was very similar in magnitude to the white-black earnings gap, but after adding these basic controls, the white-AIAN gap is a few percentage points smaller than the white-black earnings gap. The "other race" workers, a group that often includes AIAN in other studies, has earnings that are 12.9 percent lower than whites after controlling for education and experience. The fact that the white-AIAN gap is larger than the white-other gap suggests that combining AIAN and other may be obscuring some important details about the AIAN community.[10]

Our main interest in this paper is the differential returns to a degree. In column (3), we estimate the returns to education separately for each racial group. We do this by interacting the indicator for each racial group with each degree level (the table only reports the interactions for BA+ for parsimony). The coefficient on these interactions reveals the marginal return for this group relative to the omitted group (white) and are interpreted as percentage point differences. Interacting AIAN-alone with degree levels we find that AIAN workers earn lower returns to postsecondary education than do their white peers. The coefficient on the interaction of AIAN-alone and a BA+ is -0.059 indicating that, on average, the gap between AIAN workers with no college and AIAN workers with a BA+ is 5.9 percentage points narrower than the gap between white workers with no college and white workers with a BA+. More specifically, a white worker with a BA+ earns, on average 58.2 percent more than a white worker with no college coursework. An AIAN worker with a BA+ earns 52.3 percent more than an AIAN worker with no college course work (0.582-0.059=0.523). Simply put, the returns to a BA+ appear to be lower for AIAN workers than they are for white workers. We find a similar pattern for other degree levels (not shown, full results available upon request).

To this point, our analysis has only controlled for state, year, education, and experience. It is entirely possible that other observable demographic factors explain the earnings gaps. In column (4) we add controls for gender, marital status, family structure (household size, number of children as well as age of the youngest child), veteran status, region, full-time employment, rural location and whether the PUMA includes a homeland (e.g., an AIAN reservation). As expected, adding these geographic and demographic controls impact the other coefficients. Focusing on the coefficients on the interaction of race

---

[10] The coefficient on the AIAN alone interaction and the other race interaction are statistically different at the $p<0.01$ level.

and education, we find that adding a full slate of demographic and geographic controls only magnifies the findings that AIAN earn lower returns to a postsecondary education than whites. It is now the case that the returns to a BA+ are 8.04 percentage points lower for AIAN-alone workers.

Table 3B disaggregates results by gender, urban/rural residence, and residence in PUMAs on or near a reservation. The result from the entire sample (Table 3A, column 4) is reproduced in the first column of Table 3B for ease of comparison. Columns (2) and (3) report results for women and men. We find that the white-AIAN gap for workers with no college course work (i.e., the main coefficients on AIAN-alone) is statistically significant only for men. In other words, after controlling for other demographic and geographic differences, female workers with no college who identify as AIAN (alone or in combination) have earnings that are, on average, no different from their white peers. In contrast, the earnings gap for workers with no college persists for women from other nonwhite racial groups. Moving to workers with more education, we find that the returns to postsecondary education are lower for both male and female AIAN workers than for male and female white workers at all degree levels. Here the coefficients are slightly more negative for women than for men, indicating that AIAN women with a BA+ lag further behind their white counterparts than do AIAN men.

Previous research suggests that earnings gaps were less stark in rural areas (Kimmel 1997) but perhaps more pronounced in areas on or near a reservation (Gitter and Regan 2002). Columns (4) and (5) compare workers who live in urban areas to workers who live in rural areas. In columns (6) and (7), we compare workers who live in PUMAs that include a designated homeland (i.e. an AIAN reservation) to those who live in PUMAs that do not include a homeland. We find that for workers without any college coursework, the white-AIAN earnings gap is larger in rural areas and in PUMAs that include a homeland. For white workers (the omitted category) we find that the returns to education are larger in urban areas than they are in rural areas and/or areas that include a homeland. Turning to the coefficients on the interactions of AIAN status and education, we find lower returns to education for AIAN workers is largely an urban phenomenon. This is consistent with Kimmel's conclusion that returns to education are more similar for rural workers than for urban workers. Finally, in a robustness check (not shown) we estimate the results separately for each year and find no evidence of favorable (or unfavorable) trends. The disparities are consistent over the time period studied.

In sum, we find that education improves earnings across all racial groups. However, on average, white workers see the largest earnings boost. AIAN (and other nonwhite groups) see smaller gains. Given this, equalizing educational attainment alone is likely insufficient to bring AIAN workers' earnings up to those of their white peers. Workers who identify as AIAN-alone experience the most disadvantage in the labor market; workers who identify as AIAN in combination with another race show similar patterns but

slightly smaller magnitudes. These patterns do not seem to be improving over time, and evidence suggests the problem is more severe for males and in urban areas.

4.2 Employment and Labor Force Participation

Next, we turn to employment and LFP to measure the gains associated with postsecondary education. In Table 4A, we repeat the analysis with employment as the dependent variable. Employment is a more basic measure of labor force success than earnings. Employment simply measures the existence of a job and does not reveal anything about the quality of employment. Some workers may be underemployed, i.e., working low-wage jobs that are below their full earnings potential. Unlike earnings, employment is a binary outcome. The results presented are estimates from a linear probability model (an ordinary least squares estimate) but all results are robust to logit and/or probit specifications.

In the first column, we see the raw gaps in employment while controlling only for state and year fixed effects. The coefficient on AIAN-alone indicates that the AIAN workers have an employment rate that is 7.48 percentage points lower than the employment rate for white workers. This is the largest racial employment gap. The gap between white and black workers is the next largest with a 6.34 percentage point difference. AIAN who also identify as another race or as Hispanic have slightly smaller employment gaps. In the second column, we see that adding controls for education and experience explains some, but not all, of the racial employment gaps. As expected, we find that employment rates increase substantially with education and increase at a diminishing rate with experience. After controlling for education and experience, the employment gaps for AIAN alone and black fall to 6.24 and 5.39 percentage points, respectively, but the gaps for AIAN in combination with another race or Hispanic do not change much. As with earnings, these are still a striking gaps.

The primary concern for this study is differential returns to education. In the third column, we interact race and education and find that AIAN workers experience *larger* increases in employment associated with higher education than their white peers. There is, however, a caveat—the differential returns are not sufficient to close the employment gap. That is, the coefficient on the interaction of AIAN-alone and a BA+ is 0.068, which is not enough to offset the coefficient on AIAN-alone, -0.090. Taken together, AIAN workers with a BA+ are still less likely to be employed than white workers with a BA+. Summing the coefficients reveals that employment rates for AIAN-alone workers with a BA+ are 2.2 percentage points lower than employment rates for white workers with a BA+ (-0.090 + 0.068 = -0.022). In column (4), we add demographic and geographic controls. These controls explain some of the white-AIAN employment gap for workers without any college coursework. The differential return to education also

falls, however. So it remains the case that the white-AIAN employment gap narrows with education but does not disappear.[11]

As before, the pattern is similar but the magnitudes are smaller for AIAN workers who also identify as another race. In comparison to other racial employment gaps, the white-AIAN pattern seems much more similar to the white-black gap than the white-other gap. This suggests that lumping AIAN with "other," as is commonly done in response to small sample sizes, is misleading and obscures important details.

Table 4B disaggregates results by gender, urban/rural residence, and residence in PUMAs on or near a reservation. We find that the white-AIAN employment gap is larger for men than for women, and the marginal return for a BA+ is larger for AIAN men than AIAN women. Employment gaps and the marginal return to a BA+ are also larger in rural areas and on/near a reservation than in urban areas and in PUMAs without reservations.

Lastly, in Table 5A, we turn to labor force participation as our outcome. Earnings are contingent on being employed, and employment is contingent on being in the labor force. Thus, labor force participation is our broadest outcome measure. LFP measures labor supply on the extensive (decision to work) rather than the intensive (decision on how much to work) margin. As with employment and earnings, we see that across specifications, LFP rates are lower for AIAN than for whites. In the first column, we see the raw percentage point gap controlling only for state and year. The AIAN population that is of prime working age (25-55) has a 12.8 percentage point lower LFP rate than the white population that is of prime working age. This gap narrows to 10.0 percentage points when education and experience are included. Unsurprisingly, LFP increases with education and increases at a diminishing rate with experience.

When we interact race and education level, we find that the white-AIAN gap is 13.9 percentage points for people without any college coursework. The return on education as measured by LFP is higher for AIAN than for whites. That is, the jump in LFP associated with a degree is larger for AIAN than for white. As was the case with employment rates, this is good news but with an important caveat. The larger increases in LFP are not sufficient to erase the base gap. For instance, AIAN BA+ holders have a marginal increase in LFP of 12.2 percentage points, which does not make up for the 13.9 percentage point gap. Indeed, taken together, these coefficients show that AIAN BA+ holders have 1.7 percentage point lower LFP rates than white BA+ holders (-0.139 + 0.122 = -0.017). In column (4), we add demographic and geographic controls. These controls explain some of the white-AIAN LFP gap for workers without any college coursework as the gap narrows from 13.9 to 6.94 percentage points. The differential return to

---

[11] Tests of joint significance show that all of the statements in this paragraph are statistically significant at the p<0.01 level.

education increases and the net result is that for BA+ holders the white-AIAN gap in LFP is only 0.1 percentage points (-0.0694 + 0.0591 = -0.0103).[12]

In Table 5B, we disaggregate the LFP results by gender, urban/rural residence, and proximity to a reservation. We find that the LFP gap and the differential returns to a BA+ are larger for men than for women. The differences by geographic locale are less clear. The gap appears to be slightly larger in rural settings but not any worse in PUMAs that include a homeland.

In sum, when we use employment and LFP to assess the returns to postsecondary education, we find that education narrows but does not eliminate employment gaps between AIAN and whites. This more optimistic story echoes the findings in Austin (2013). We note, however, that employment and LFP may be particularly fraught with selection bias and further research is needed before strong causal claims can be made.

4.3 Simulation Results

Next, we use the estimates from Tables 3A, 4A and 5A (column 4 in each table) to run a simple policy simulation. We predict LFP, employment and earnings for the hypothetical policy that increases higher education attendance and completion rates for all racial groups to match the higher education attendance and completion rates of whites. That is, in Table 1, we see that 35.73 percent of whites have a BA or higher, 9.78 percent have an associated degree, 22.27 percent have some college but no degree and the remaining 32.22 percent have no college experience. We assign those shares to the entire sample of prime-age adults,[13] leaving their other demographic and geographic information unchanged and predict LFP, employment, and earnings for this counterfactual. The counterfactual does not attempt to estimate a general equilibrium result. Clearly a large increase in higher education would impact wage rates and have implications for endogenous decisions like family structure that impact labor supply. Leaving that aside, however, this simple simulation provides what is likely an upper bound of the impact that any intervention that targets nonwhite higher educational attainment could have on labor market racial disparities.

Table 6 reports the results of this exercise. The first row of each panel reports the actual group mean; the second row shows the predicted group mean using true education levels. The only reason these two rows differ is because all prime-age adults are assigned a predicted probability of seeking and finding

---

[12] Tests of joint significance show that all of the statements in this paragraph are statistically significant at the p<0.01 level.
[13] Rather than thinking of this assigning everyone 0.3573 of a BA+ and 0.0978 of an associate degree, etc., it makes more sense to think of this as assigning everyone a 35.73 percent chance of earning a BA+, a 9.78 percent change of earning an associate degree, etc.

work; whereas, actual employment is dependent on LFP and actual earnings are dependent on employment. (Note that the sample size for the prediction is the entire sample of prime-age workers.) The third row reports the simulation, i.e., the predicted outcomes with the hypothetical education levels. Since the simulation assigns everyone the actual education distribution of whites, the predicted outcomes for whites are unchanged. Below that we calculate the actual and predicted log-point gap in earnings for each nonwhite group relative to non-Hispanic whites. Lastly, we take the ratio of these numbers to report the share of the earnings gap that would remain unexplained. Although our focus is on AIAN workers, we also report the results of our simulation for black and Hispanic prime-age adults.

The top panel reports results for LFP. The simulation produces very small gains in LFP. For AIAN-alone, the LFP rate inches up from 69.9 percent to 70.8 percent. This narrows the white-AIAN gap from 13.3 to 12.4 percentage points. The hypothetical levels of education leave 93.3 percent of the white-AIAN gap unexplained. The next panel reports results for employment. We find similarly small gains in employment. For AIAN-alone, the employment rate increases only by 0.8 percentage points, and 92.1 percent of the white-AIAN gap remains unexplained. The third panel reports results for log earnings. Here we see a larger impact of our hypothetical policy. Log earnings for AIAN-alone increase from 10.177 to 10.292, decreasing the white-AIAN gap from 0.357 to 0.242 log points. The increased education levels cut into the earnings gap, but 67.8 percent of the gap remains unexplained.

Another purpose of the simulation is to provide some intuition for the net effect of our findings. Since we find that the marginal increases in LFP and employment are larger for AIAN degree holders than for white degree holders but that the marginal increases in earnings are smaller, the combined impact is not immediately clear. In other words, what is the net effect if this hypothetical policy leads to more AIAN prime-age adults working but at lower-paying jobs than their white peers with similar levels of education? To answer this question, we multiply through the conditional probabilities, i.e., earnings conditional on employment conditional on being in the labor force. This gives the expected earnings for a randomly selected individual within each group. The bottom panel of Table 6 shows that the expected log earnings with true education levels is 7.829 for whites and 5.917 for AIAN, a gap of 2.163 log points. When we use the counterfactual education levels the gap is 1.969 log points. The net effect of the policy is distressingly small. Fully 91 percent of the white-AIAN gap remains unexplained.

5. Discussion

We study the returns to postsecondary education using data from the ACS spanning 2008-2016. These surveys have unprecedented detail about AIAN self-identification, enabling us to provide a nuanced look at earnings, employment, and LFP gaps and the role that postsecondary education may play

in closing those gaps. We find that additional education increases LFP rates, employment rates, and average earnings across the board but at different rates for different racial groups. Policymakers should not ignore that higher education is a good investment for all Americans but that it pays higher returns to white Americans.

Our results suggest that given the current racial patterns in postgraduation earnings, equalizing educational attainment would not be sufficient to close racial employment and earnings gaps. We stress that this does not mean that policies that increase higher education are not necessary or important. The unequal returns to higher education may be a concern of secondary importance. Should such an increase in college attainment occur, society may be very willing to tolerate inequality in exchange for large increases in average earnings across the population. Still, reducing inequality among similarly educated workers is likely an important policy goal since inequality limits intergenerational economic mobility (Corak 2013) and because much of the growth in income inequality in the United States has been concentrated within, rather than between, education levels (Lemieux 2006).

It is worth remembering that our analysis is largely descriptive in nature. We are able to control for observable demographic and geographic differences that likely impact earnings, but we are unable to control for self-selection into post-secondary education, and our simulation ignores general equilibrium consequences. Additionally, although the ACS has rich data on racial identity, there are more limited data on the context for each student's higher education experience. For instance, we know the highest degree level, but we do not know if the person attended a public or private institution or, for AIAN students, if they took part in the TCU system. We also do not know student GPA or courses completed and do not know what, if any wraparound supports the students received while in college. Future work should consider how these variables mediate our results. There is a rich body of research into targeted programs that support AIAN students (e.g. Brayboy, Fann, Catango, and Solyom 2012). Our findings support the need for these targeted programs. It is clear that getting AIAN students to enroll in college, and even to complete, BA and advanced degrees, is only part of the story.

We also do not know how the students financed their higher education. The fact that AIAN students experience gains in earnings but that those gains in earnings are smaller than white students suggests that AIAN Americans will have a harder time paying off college debt. Heavy debt burdens negatively impact the overall financial health of households (Elliot and Nam 2013). This will exacerbate wealth inequalities, reduce intergenerational mobility and may rationally discourage AIAN students from pursuing higher education. Given this, policies that aim to increase AIAN college going and completion should also favor grant aid over loans. A related policy would be to increase loan- orgiveness for AIAN students. Qualitative evidence suggests that AIAN students are disproportionately motivated to complete advanced degrees because they want to help their communities rather than for purely individual gain (Brayboy et al.

2015). A loan-forgiveness program could be linked to working in a job that directly gives back to the community. Evidence that AIAN students may be disproportionately motivated by altruistic goals points to another area for future research. We cannot rule out the possibility that AIAN Americans are choosing to take lower-paid jobs that are rewarding in other ways.

Our results do not confirm, but are nonetheless consistent with, the possibility of labor market discrimination, since disparities persist after a host of controls for observable demographics are included. The labor market experience for a demographically and geographically similar white worker and AIAN worker is different even if those workers have the same degree level. This supports literature focused on employer-driven discrimination and/or inequities in the PK-12 educational system that could leave AIAN students disproportionately underprepared to take full advantage of the earnings boost that college offers (Fischer and Stoddard 2013).

In conclusion, while the analysis in this study does not offer direct policy guidance, it is an important part of the overall story of the AIAN experience in higher education. This analysis also sheds light on the role that education plays in addressing or exacerbating racial disparities in the labor market. Our findings suggest that higher education increases earnings across the board but at differential rates by race. Thus, while college going and completion are likely key to advancing the well-being of AIAN communities, our findings imply that increased college attainment alone will not eliminate persistent racial earnings inequalities.

References

Abel, J. and R. Dietz. 2014. Do the Benefits of College Still Outweigh the Costs? Federal Reserve Bank of New York *Current Issues in Economics and Finance, 20*(3).

Akee, R., and T. Yazzie-Mintz. 2011. "Counting Experience" among the Least Counted: The Role of Cultural and Community Engagement on Educational Outcomes for American Indian, Alaska Native, and Native Hawaiian Students. *American Indian Culture and Research Journal*, 35 (3), 119-150.

Akee, R. K., W. E. Copeland, G. Keeler, A. Angold, and E.J. Costello. 2010. Parents' incomes and children's outcomes: a quasi-experiment using transfer payments from casino profits. *American Economic Journal: Applied Economics*, 2 (1): 86–115.

Angrist, J. and A. Krueger. 1999. Empirical Strategies in Labor Economics. In the *Handbook of Labor Economics*, Volume 3, Edited by O. Ashenfelter and D. Card, Elsevier Science.

Austin, A. 2013. Native Americans and Jobs: The Challenge and the Promise. *EPI Briefing Paper #370*, Economic Policy Institute.

Bertrand, M. and S. Mullainathan. 2004. Are Emily and Greg More Employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review* 94 (4): 991–1013.

Brayboy, B.M.K.J., A.J. Fann, A.E. Castagno, and J.A. Solyom. 2012. Postsecondary Education for American Indian and Alaskan Natives: Higher Education for National Building and Self-Determination, *ASHE Higher Education Report* 37 (5).

Brayboy, B.M.K.J., J.A. Solyom, and A.E. Castagno. 2015. Indigenous Peoples in Higher Education, *Journal of American Indian Education*, 54 (1): 154-186.

Card, D. and A.B. Krueger. 1992. Does school quality matter? Returns to education and the characteristics of public schools in the United States, *Journal of Political Economy* 100 (1): 1–40.

Carneiro, P. and J.J .Heckman. 2005. Labor market discrimination and racial differences in premarket factors. *The Journal of Law and Economics* 48 (1).

Carneiro, P., J.J .Heckman, and E. J. Vytlacil. 2011. Estimating marginal returns to education. *American Economic Review*, *101*(6), 2754–81.

Cooper, S. and E. Cohn. 1997. Internal Rates of Return to College Education in the United States by Sex and Race. *Journal of Education Finance*, 23 (1): 101–133.

Corak, M. 2013. Income Inequality, Equality of Opportunity, and Intergenerational Mobility. *Journal of Economic Perspectives,* 27 (3): 79–102.

Cunningham, J. 2007. *The Path of Many Journeys: The Benefits of Higher Education for Native People and Communities*. A report by the Institute for Higher Education Policy in collaboration with the American Indian Higher Education Consortium and the American Indian College Fund, February 2007.

Elliot, W. and I. Nam. 2013. Is Student Debt Jeopardizing the Short-Term Financial Health of U.S. Households? Federal Reserve Bank of St. Louis *Review*, September/October, 95 (5): 405–24.

Feir, D. L. 2016. The long-term effects of forcible assimilation policy: The case of Indian boarding schools. *Canadian Journal of Economics/Revue canadienne d'economique*, 49 (2): 433–480.

Fischer, S. and C. Stoddard. 2013. The Academic Achievement of American Indians, *Economics of Education Review,* 36: 135–152.

Gaddis, S.M. 2014. Discrimination in the Credential Society: An audit study of race and college selectivity in the labor market. *Social Forces* 93 (3): 1451–1479.

Gitter, R. J. and P.B. Reagan. 2002. Reservation wages: An analysis of the effects of reservations on employment of American Indian men. *The American Economic Review*, 92 (4):1160–1168.

Guillory, R. M. and M. Wolverton. 2008. It's about family: Native American student persistence in higher education. *The Journal of Higher Education*, 79 (1): 58–87.

Harmon, C and H. Oosterbeek. 2003. The returns to education: Microeconomics. *Journal of Economic Surveys* 6 (4): 453–470.

Heckman, J.J. 1998. Detecting Discrimination. *Journal of Economic Perspectives* 12 (2): 101–116.

Heckman, J.J., L.J. Lochner and P.E. Todd. 2006. Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond. In the *Handbook of the Economics of Education*, Volume 1, Edited by E. Hanushek and F. Welch.

Hurst, M. 1997. The determinants of earnings differentials for indigenous Americans: Human capital, location, or discrimination? *The Quarterly Review of Economics and Finance*, 37 (4): 787–807.

James, J. 2012. The College Wage Premium. Federal Reserve Bank of Cleveland. *Economic Commentary*, Number 2012-10, August 8.

Kimmel, J. 1997. Rural Wages and Returns to Education: Differences between Whites, Blacks and American Indians. *Economics of Education Review*, 16 (1): 81–96.

Kuhn, P. and A. Sweetman. 2002. Aboriginals as unwilling immigrants: Contact, assimilation and labour market outcomes. *Journal of Population Economics*, 15 (2): 331–355.

Lemieux, T. 2006. Postsecondary Education and Increasing Wage Inequality. *American Economic Review,* 96 (2): 195–199.

Mincer, J.A. 1974. *Schooling, Experience and Earnings*, National Bureau of Economic Research.

Monks, J. 2000. The Returns to Individual and College Characteristics: Evidence form the National Longitudinal Survey of Youth, *Economics of Education Review* 19 (3): 279–289.

Neal, D. and W. Johnson. 1996. The Role of Premarket Factors in Black-White Wage Differences, *Journal of Political Economy*, 105 (5): 869–895.

Patrinos, H. A. and C. N. Sakellariou. 1992. North American Indians in the Canadian labour market: A decomposition of wage differentials. *Economics of Education Review*, 11 (3): 257–266.

Perna L.W. 2005. The Benefits of Higher Education: Sex, racial/ethnic and socioeconomic group differences. *The Review of Higher Education,* 29(1): 23–52.

Psacharopoulos, G. and H. Patrinos. 2004. Returns to Investment in Education: A Further Update. *Education Economics*, 12 (2).

Robst, J. 2007. Education and job match: The relatedness of college major and work. *Economics of Education Review*, 26 (4): 397–407.

Ruggles, S., K. Genadek, R. Goeken, J. Grover, and M. Sobek**.** 2015. *Integrated Public Use Microdata Series: Version 6.0* [dataset]. Minneapolis: University of Minnesota. http://doi.org/10.18128/D010.V6.0.

Simpson, J. C. 2001. Segregated by subject: Racial differences in the factors influencing academic major between European Americans, Asian Americans, and African, Hispanic, and Native Americans. The Journal of Higher Education, 72 (1): 63–100.

Snipp, C. M. and G.D. Sandefur. 1988. Earnings of American Indians and Alaskan Natives: The effects of residence and migration. *Social Forces*, 66 (4): 994–1008.

Strayhorn, T. L. 2008. Influences on labor market outcomes of African American college graduates: A national study. *The Journal of Higher Education*, 79 (1): 28–57.

Wise, J., C. Liebler, and R. Todd. 2017. Dissimilarity on the Career Path: The Occupational Structure of the American Indian/Alaskan Native Workforce. *Working Paper No. 2017-01.* Center for Indian Country Development.

Table 1. Cell Counts by Race, Ages 25–55

	(1)		(2)		(3)		(4)		(5)	
	Total N		No higher education		Some college		Associate degree		Bachelor's degree+	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
White	7,412,480	6,889,342	2,376,342	2,219,715	1,620,083	1,534,224	740,046	674,071	2,676,009	2,461,332
Proportion	66.79%	62.07%	32.06%	32.22%	21.86%	22.27%	9.98%	9.78%	36.10%	35.73%
AIAN alone	100,440	73,276	51,910	36,045	27,361	20,416	8,830	6,558	12339	10,257
Proportion	0.90%	0.66%	51.69%	49.19%	27.24%	27.86%	8.79%	8.95%	12.28%	14.00%
AIAN and other race	75,548	70,217	28,412	25,563	22,470	21,301	7,612	7,240	17,054	16,114
Proportion	0.68%	0.63%	37.61%	36.41%	29.74%	30.34%	10.08%	10.31%	22.57%	22.95%
AIAN and Hispanic	33,967	34,630	17,650	18,634	8,297	8,266	2,532	2,433	5,488	5,297
Proportion	0.31%	0.31%	51.96%	53.81%	24.43%	23.87%	7.45%	7.03%	16.16%	15.30%
Hispanic	1,566,165	1,867,709	918,934	1,138,577	294,196	343,494	99,723	113,737	253,312	271,901
Proportion	14.11%	16.83%	58.68%	60.96%	18.78%	18.39%	6.37%	6.09%	16.17%	14.56%
Black, non-Hispanic	1,163,097	1,386,432	528,532	612,489	303,647	374,464	96,882	118,513	234,036	280,966
Proportion	10.48%	12.49%	45.44%	44.18%	26.11%	27.01%	8.33%	8.55%	20.12%	20.27%
Asian Pacific Islander, non-Hispanic	628,876	652,041	141,964	154,589	81,983	86,699	44,684	45,395	360,245	365,359
Proportion	5.67%	5.87%	22.57%	23.71%	13.04%	13.3%	7.11%	6.96%	57.28%	56.03%
Other race, non-Hispanic	19,169	23,106	7,263	9,083	3,718	4,336	1,562	1,821	6,626	7,867
Proportion	0.17%	0.21%	37.89%	39.31%	19.4%	18.76%	8.15%	7.88%	34.57%	34.05%
Two or more races, non-AIAN and non-Hispanic	99,268	102,255	26,133	27,368	24,041	25,570	9,368	9,586	39,726	39,729
Proportion	0.89%	0.92%	26.32%	26.77%	24.22%	25.01%	9.44%	9.38%	40.02%	38.86%
Total	11,099,010	11,099,010	4,097,140	4,242,062	2,385,796	2,418,771	1,011,239	979,355	3,604,835	3,458,822
			36.91%	38.22%	21.50%	21.79%	9.11%	8.82%	32.48%	31.16%

Note: All race categories are mutually exclusive. If a person identifies as more than one group, including Hispanic, they are categorized as Hispanic.

Table 2. Summary Statistics, Ages 25–55

	(1)	(2)
	Total	AIAN
Earnings	$51,384.33	$36,707.48
Log Earnings	10.40	10.04
Employment rate	0.93	0.87
Labor Force Participation rate	0.81	0.70
AIAN alone	0.01	0.48
AIAN and other race	0.01	0.36
AIAN and Hispanic	0.003	0.16
Hispanic	0.14	0.16
Black	0.10	-
Asian Pacific Islander	0.06	-
Other race	0.002	-
Two or more races, non-AIAN	0.01	-
Some college	0.21	0.28
Associate degree	0.09	0.09
Bachelor's degree	0.32	0.17
Age	40.88	40.42
Years of school	13.58	12.76
Potential experience (Age - Yrs School - 6), mean	21.30	21.66
Female	0.51	0.51
Northeast region	0.18	0.08
Midwest region	0.21	0.16
South region	0.37	0.32
West region	0.24	0.45
Married	0.60	0.46
Household size	3.10	3.23
Number of children	1.06	1.08
Has children	0.54	0.51
Age of youngest if has children	5.31	5.11
Full-time employee	0.68	0.57
Veteran status	0.07	0.08
Rural	0.14	0.26
PUMA includes reservation	0.16	0.49
Total Observations	11,099,010	209,955

Note: Unweighted summary statistics.

Table 3A. Log Earnings

	(1)	(2)	(3)	(4)
	Race	Race and Educ	Race, Educ, and Race * Educ	with Demographic Controls
AIAN alone	-0.236***	-0.151***	-0.121***	-0.0626***
	(-62.19)	(-42.48)	(-20.54)	(-11.31)
AIAN and other race	-0.152***	-0.115***	-0.0702***	-0.0376***
	(-37.35)	(-30.07)	(-9.75)	(-5.66)
AIAN and Hispanic	0.0213***	-0.000705	-0.0435***	-0.0316***
	(3.91)	(-0.14)	(-6.16)	(-4.67)
Hispanic	-0.386***	-0.227***	-0.232***	-0.227***
	(-435.95)	(-268.32)	(-272.29)	(-281.97)
Black	-0.235***	-0.170***	-0.178***	-0.128***
	(-239.53)	(-189.46)	(-117.52)	(-90.56)
Asian Pacific Islander	-0.0118***	-0.0675***	-0.247***	-0.224***
	(-8.42)	(-53.51)	(-98.14)	(-92.23)
Other race	-0.181***	-0.129***	-0.153***	-0.139***
	(-25.03)	(-19.38)	(-14.16)	(-13.74)
Two or more races, non-AIAN	-0.0833***	-0.0581***	-0.0682***	-0.0424***
	(-26.41)	(-20.20)	(-10.87)	(-7.41)
Some College		0.178***	0.176***	0.181***
		(238.47)	(212.59)	(242.94)
Associate degree		0.263***	0.258***	0.281***
		(276.06)	(247.49)	(296.46)
Bachelor's degree or higher		0.601***	0.582***	0.565***
		(851.68)	(757.49)	(790.90)
Potential Experience (Age - Yrs School - 6)		0.0392***	0.0391***	0.0304***
		(324.83)	(324.73)	(261.84)
potexp2		-0.000695***	-0.000691***	-0.000529***
		(-242.04)	(-241.14)	(-192.71)
AIAN Alone * Bachelor's+ degree			-0.0597***	-0.0804***
			(-6.16)	(-8.86)
AIAN and other race * Bachelor's+ degree			-0.0674***	-0.0735***
			(-6.76)	(-8.06)
AIAN and Hispanic * Bachelor's+ degree			0.0768***	0.0776***
			(5.60)	(6.06)
Black * Bachelor's+ degree			0.0280***	0.00471*
			(12.66)	(2.26)
Asian * Bachelor's+ degree			0.272***	0.227***
			(91.55)	(80.53)
Other race, nonwhite, non-AIAN * Bachelor's+ degree			0.0451**	0.0282
			(2.90)	(1.96)
Two or more races, non-AIAN * Bachelor's+ degree			0.0309***	0.00988
			(4.08)	(1.43)
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Demographic Controls	No	No	No	Yes
Observations	7,096,573	7,096,573	7,096,573	7,096,573

Note: Regressions are weighted using sampling weights provided by IPUMS. The reported coefficients are the estimated change in probability of employment associated with a discrete change in the independent variable, calculated at the mean of the sample. T statistics are reported in parentheses. * $p<0.05$ ** $p<0.01$ *** $p<0.001$

Table 3B. Log Earnings by Demographics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All	Male	Female	Urban	Rural	Not near Reservation	On or near Reservation
AIAN alone	-0.0626***	-0.104***	-0.00444	-0.0646***	-0.0976***	-0.0570***	-0.100***
	(-11.31)	(-14.04)	(-0.54)	(-9.34)	(-10.70)	(-5.73)	(-14.95)
AIAN & other race	-0.0376***	-0.0557***	-0.0151	-0.0338***	-0.0647***	-0.0422***	-0.0495***
	(-5.66)	(-6.60)	(-1.41)	(-4.51)	(-4.72)	(-5.08)	(-4.52)
AIAN & Hispanic	-0.0316***	-0.0341***	-0.00624	-0.0335***	0.0121	-0.0401***	-0.00645
	(-4.67)	(-4.01)	(-0.57)	(-4.77)	(0.52)	(-5.46)	(-0.38)
Hispanic	-0.227***	-0.267***	-0.170***	-0.228***	-0.184***	-0.230***	-0.204***
	(-281.97)	(-241.90)	(-147.61)	(-274.23)	(-54.56)	(-266.73)	(-89.43)
Black	-0.128***	-0.172***	-0.0686***	-0.125***	-0.151***	-0.124***	-0.160***
	(-90.56)	(-84.93)	(-35.17)	(-83.40)	(-32.58)	(-82.29)	(-37.62)
Asian Pacific Islander	-0.224***	-0.276***	-0.150***	-0.222***	-0.146***	-0.237***	-0.148***
	(-92.23)	(-79.19)	(-44.98)	(-89.75)	(-11.46)	(-90.58)	(-22.81)
Other race	-0.139***	-0.168***	-0.0904***	-0.136***	-0.124**	-0.139***	-0.126***
	(-13.74)	(-12.70)	(-5.78)	(-13.11)	(-2.77)	(-13.06)	(-3.82)
Two or more races, non-AIAN	-0.0424***	-0.0787***	0.0189*	-0.0433***	-0.00390	-0.0576***	-0.0137
	(-7.41)	(-10.40)	(2.21)	(-7.20)	(-0.22)	(-8.77)	(-1.16)
Some College	0.181***	0.189***	0.176***	0.191***	0.123***	0.188***	0.148***
	(242.94)	(186.11)	(162.27)	(236.20)	(64.64)	(229.84)	(80.93)
Associate degree	0.281***	0.261***	0.310***	0.287***	0.253***	0.285***	0.261***
	(296.46)	(192.59)	(234.54)	(278.13)	(107.17)	(274.06)	(113.37)
Bachelor's+	0.565***	0.536***	0.596***	0.575***	0.479***	0.575***	0.504***
	(790.90)	(549.28)	(574.05)	(751.44)	(240.11)	(740.11)	(274.11)
Potential Experience	0.0304***	0.0327***	0.0303***	0.0310***	0.0253***	0.0307***	0.0292***
	(261.84)	(196.85)	(188.44)	(253.66)	(68.31)	(246.89)	(89.73)
potexp2							
	0.000529***	-0.000574***	-0.000547***	-0.000542***	-0.000415***	-0.000535***	-0.000505***
	(-192.71)	(-148.39)	(-141.47)	(-187.01)	(-48.61)	(-181.46)	(-66.31)
AIAN Alone * Bachelor's+	-0.0804***	-0.0792***	-0.0989***	-0.0827***	0.0107	-0.0707***	-0.0240*
	(-8.86)	(-5.55)	(-8.33)	(-7.64)	(0.63)	(-4.73)	(-2.09)
AIAN & other race * Bachelor's+	-0.0735***	-0.0755***	-0.0776***	-0.0785***	-0.0308	-0.0682***	-0.0441**
	(-8.06)	(-5.94)	(-5.73)	(-7.90)	(-1.22)	(-6.20)	(-2.66)
AIAN & Hispanic * Bachelor's+	0.0776***	0.0929***	0.0230	0.0760***	0.0366	0.0842***	0.0620
	(6.06)	(4.90)	(1.32)	(5.77)	(0.71)	(6.14)	(1.76)
Black * Bachelor's+	0.00471*	-0.0299***	-0.00446	-0.00279	0.00754	-0.00338	0.0405***
	(2.26)	(-9.22)	(-1.65)	(-1.29)	(0.83)	(-1.54)	(5.89)
Asian * Bachelor's+	0.227***	0.268***	0.167***	0.222***	0.0794***	0.241***	0.0956***
	(80.53)	(67.01)	(42.69)	(77.28)	(4.66)	(79.84)	(11.65)
Other race * Bachelor's+	0.0282	0.0456*	-0.00940	0.0214	0.0239	0.0248	0.0106
	(1.96)	(2.30)	(-0.44)	(1.45)	(0.36)	(1.65)	(0.21)
Two or more races, non-AIAN * Bachelor's+	0.00988	0.0198*	-0.0303**	0.00825	-0.0423	0.0293***	-0.0461**
	(1.43)	(2.09)	(-3.03)	(1.15)	(-1.51)	(3.75)	(-2.97)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,096,573	3,714,448	3,382,125	6,180,112	916,461	5,968,624	1,127,949

Note: Regressions are weighted. The reported coefficients are the estimated change in probability of employment associated with a discrete change in the independent variable, calculated at the mean of the sample. T statistics are reported in parentheses. * p<0.05 ** p<0.01 *** p<0.001

	(1)	(2)	(3)	(4)
	Race	Race and Educ	Race, Educ, and Race * Educ	with Demographic Controls
AIAN alone	-0.0748***	-0.0624***	-0.0901***	-0.0687***
	(-41.28)	(-34.70)	(-28.63)	(-23.40)
AIAN and other race	-0.0559***	-0.0507***	-0.0705***	-0.0502***
	(-30.65)	(-28.02)	(-18.35)	(-13.88)
AIAN and Hispanic	-0.0268***	-0.0297***	-0.0260***	-0.0159***
	(-10.87)	(-12.11)	(-7.04)	(-4.54)
Hispanic	-0.0190***	0.00169***	-0.0000790	0.00219***
	(-54.60)	(4.69)	(-0.22)	(6.26)
Black	-0.0634***	-0.0539***	-0.0813***	-0.0600***
	(-136.05)	(-116.99)	(-93.18)	(-74.71)
Asian Pacific Islander	0.00605***	0.000439	0.0135***	0.0124***
	(13.99)	(1.02)	(12.46)	(12.11)
Other race	-0.0189***	-0.0115***	-0.000230	0.00252
	(-7.10)	(-4.35)	(-0.05)	(0.55)
Two or more races, non-AIAN	-0.0214***	-0.0190***	-0.0300***	-0.0180***
	(-17.00)	(-15.22)	(-9.41)	(-6.02)
Some College		0.0320***	0.0278***	0.0183***
		(92.41)	(76.54)	(52.90)
Associate degree		0.0510***	0.0450***	0.0301***
		(125.63)	(105.95)	(73.82)
Bachelor's degree or higher		0.0727***	0.0663***	0.0369***
		(243.29)	(212.26)	(124.16)
Potential Experience (Age - Yrs School - 6)		0.00138***	0.00141***	-0.00123***
		(27.86)	(28.34)	(-24.38)
potexp2		-0.00000814***	-0.00000934***	0.0000309***
		(-6.81)	(-7.81)	(25.64)
AIAN Alone * Bachelor's+ degree			0.0680***	0.0504***
			(16.23)	(12.85)
AIAN and other race * Bachelor's+ degree			0.0421***	0.0325***
			(9.19)	(7.52)
AIAN and Hispanic * Bachelor's+ degree			0.00234	0.00294
			(0.41)	(0.54)
Black * Bachelor's+ degree			0.0563***	0.0384***
			(52.78)	(38.95)
Asian * Bachelor's+ degree			-0.0167***	-0.0190***
			(-14.30)	(-17.29)
Other race, nonwhite, non-AIAN * Bachelor's+ degree			-0.0155*	-0.0141*
			(-2.55)	(-2.47)
Two or more races, non-AIAN * Bachelor's+ degree			0.0201***	0.0105**
			(5.78)	(3.18)
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Demographic Controls	No	No	No	Yes
Observations	8,970,289	8,970,289	8,970,289	8,970,289

Note: Regressions are weighted using sampling weights provided by IPUMS. The reported coefficients are the estimated change in probability of employment associated with a discrete change in the independent variable, calculated at the mean of the sample. T statistics are reported in parentheses. * $p<0.05$ ** $p<0.01$ *** $p<0.001$

Table 4B. Employment Status by Demographics

	(1) All	(2) Male	(3) Female	(4) Urban	(5) Rural	(6) Not near Reservation	(7) On or near Reservation
AIAN alone	-0.0687***	-0.0710***	-0.0584***	-0.0595***	-0.0794***	-0.0440***	-0.0777***
	(-23.40)	(-18.25)	(-13.39)	(-16.10)	(-16.31)	(-8.29)	(-21.81)
AIAN & other race	-0.0502***	-0.0435***	-0.0526***	-0.0511***	-0.0442***	-0.0550***	-0.0392***
	(-13.88)	(-9.29)	(-9.33)	(-12.68)	(-5.43)	(-12.18)	(-6.57)
AIAN & Hispanic	-0.0159***	-0.0156***	-0.0163**	-0.0158***	-0.0157	-0.0110**	-0.0353***
	(-4.54)	(-3.59)	(-2.77)	(-4.34)	(-1.25)	(-2.97)	(-3.69)
Hispanic	0.00219***	0.0139***	-0.0126***	0.00188***	-0.000158	0.00267***	-0.00193
	(6.26)	(30.22)	(-23.40)	(5.20)	(-0.10)	(7.16)	(-1.88)
Black	-0.0600***	-0.0550***	-0.0588***	-0.0614***	-0.0487***	-0.0609***	-0.0523***
	(-74.71)	(-50.05)	(-50.40)	(-72.79)	(-17.95)	(-71.29)	(-21.79)
Asian Pacific Islander	0.0124***	0.0192***	0.00821***	0.0119***	0.0158**	0.0114***	0.0204***
	(12.11)	(13.29)	(5.73)	(11.40)	-2.86	(10.36)	(7.38)
Other race	0.00252	0.00837	-0.00256	0.00298	-0.0226	0.00456	-0.0229
	(0.55)	(1.37)	(-0.37)	(0.64)	(-1.09)	(0.98)	(-1.18)
Two or more races, non-AIAN	-0.0180***	-0.00854*	-0.0257***	-0.0183***	-0.0166	-0.0181***	-0.0147*
	(-6.02)	(-2.24)	(-5.36)	(-5.84)	(-1.57)	(-5.35)	(-2.27)
Some College	0.0183***	0.0187***	0.0182***	0.0177***	0.0213***	0.0179***	0.0203***
	(52.90)	(41.29)	(33.85)	(47.34)	-23.19	(47.16)	(23.95)
Associate degree	0.0301***	0.0259***	0.0334***	0.0291***	0.0351***	0.0298***	0.0312***
	(73.82)	(46.04)	(56.22)	(65.57)	-34.39	(66.43)	(32.09)
Bachelor's +	0.0369***	0.0337***	0.0414***	0.0359***	0.0439***	0.0366***	0.0380***
	(124.16)	(87.87)	(88.69)	(112.60)	-53.98	(113.03)	(50.73)
Potential Experience	-0.00123***	-0.00175***	-0.00101***	-0.00125***	-0.000716***	-0.00129***	-0.000786***
	(-24.38)	(-24.57)	(-14.12)	(-23.78)	(-4.09)	(-24.05)	(-5.36)
potexp2	0.0000309***	0.0000361***	0.0000336***	0.0000301***	0.0000299***	0.0000323***	0.0000210***
	(25.64)	(21.63)	(19.16)	(23.80)	-7.42	(25.08)	(6.10)
AIAN Alone * Bachelor's+	0.0504***	0.0580***	0.0384***	0.0424***	0.0571***	0.0259***	0.0605***
	(12.85)	(9.90)	(7.15)	(8.96)	-7.73	(3.86)	(12.47)
AIAN & other race * Bachelor's+	0.0325***	0.0358***	0.0276***	0.0331***	0.0294**	0.0359***	0.0271***
	(7.52)	(6.06)	(4.27)	(6.99)	-2.65	(6.76)	(3.68)
AIAN & Hispanic * Bachelor's+	0.00294	0.00241	0.00836	0.00367	-0.00406	-0.00317	0.0314*
	(0.54)	(0.31)	(1.03)	(0.65)	(-0.18)	(-0.54)	(2.07)
Black * Bachelor's+	0.0384***	0.0434***	0.0338***	0.0397***	0.0277***	0.0388***	0.0370***
	(38.95)	(30.17)	(24.61)	(38.77)	-6.73	(37.27)	(11.73)
Asian * Bachelor's+	-0.0190***	-0.0165***	-0.0248***	-0.0186***	-0.00944	-0.0186***	-0.0204***
	(-17.29)	(-10.76)	(-15.83)	(-16.65)	(-1.46)	(-15.80)	(-6.63)
Other race * Bachelor's+	-0.0141*	-0.0144	-0.0155	-0.0155**	0.0423	-0.0164**	0.0145
	(-2.47)	(-1.89)	(-1.81)	(-2.66)	-1.84	(-2.80)	(0.62)
Two or more races, non-AIAN * Bachelor's+	0.0105**	0.00460	0.0154**	0.0104**	0.0157	0.0100**	0.0110
	(3.18)	(1.07)	(3.01)	(3.04)	-1.23	(2.72)	(1.51)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,970,289	4676720	4,293,569	7,797,045	1,173,244	7,537,103	1,433,186

Note: Regressions are weighted using sampling weights provided by IPUMS. The reported coefficients are the estimated change in probability of employment associated with a discrete change in the independent variable, calculated at the mean of the sample. T statistics are reported in parentheses. * p<0.05 ** p<0.01 *** p<0.001

Table 5A. Labor Force Participation

	(1) Race	(2) Race and Educ	(3) Race, Educ, and Race * Educ	(4) with Demographic Controls
AIAN alone	-0.128***	-0.100***	-0.139***	-0.0694***
	(-61.39)	(-48.89)	(-44.80)	(-28.35)
AIAN and other race	-0.0979***	-0.0873***	-0.135***	-0.0669***
	(-46.81)	(-42.71)	(-35.58)	(-21.65)
AIAN and Hispanic	-0.0234***	-0.0305***	-0.0232***	-0.00213
	(-8.19)	(-10.77)	(-5.57)	(-0.64)
Hispanic	-0.0317***	0.0103***	0.00716***	-0.000862*
	(-68.98)	(22.00)	(15.17)	(-2.27)
Black	-0.0528***	-0.0336***	-0.0847***	-0.0315***
	(-101.90)	(-66.27)	(-96.68)	(-45.19)
Asian Pacific Islander	-0.0213***	-0.0376***	0.00466**	0.00155
	(-32.22)	(-57.00)	(3.17)	(1.37)
Other race	-0.0290***	-0.0195***	0.000166	0.00286
	(-8.15)	(-5.53)	(0.03)	(0.60)
Two or more races, non-AIAN	-0.0111***	-0.0200***	-0.0354***	-0.00926**
	(-7.27)	(-13.24)	(-10.12)	(-3.24)
Some College		0.0805***	0.0695***	0.0359***
		(190.89)	(149.57)	(96.40)
Associate degree		0.114***	0.103***	0.0550***
		(217.69)	(179.78)	(117.13)
Bachelor's degree or higher		0.142***	0.131***	0.0481***
		(381.98)	(323.66)	(146.03)
Potential Experience (Age - Yrs School - 6)		0.00486***	0.00488***	0.000831***
		(73.22)	(73.68)	(14.79)
potexp2		-0.000155***	-0.000157***	-0.0000681***
		(-95.94)	(-97.25)	(-51.46)
AIAN Alone * Bachelor's+ degree			0.122***	0.0591***
			(24.23)	(14.65)
AIAN and other race * Bachelor's+ degree			0.117***	0.0714***
			(23.36)	(17.18)
AIAN and Hispanic * Bachelor's+ degree			0.0159*	0.0195***
			(2.40)	(3.37)
Black * Bachelor's+ degree			0.110***	0.0403***
			(97.80)	(43.52)
Asian * Bachelor's+ degree			-0.0593***	-0.0438***
			(-35.88)	(-34.52)
Other race, nonwhite, non-AIAN * Bachelor's+ degree			-0.0419***	-0.0292***
			(-5.07)	(-4.50)
Two or more races, non-AIAN * Bachelor's+ degree			0.0259***	0.00465
			(6.50)	(1.42)
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Demographic Controls	No	No	No	Yes
Observations	11,099,010	11,099,010	11,099,010	11,099,010

Note: Regressions are weighted using sampling weights provided by IPUMS. The reported coefficients are the estimated change in probability of employment associated with a discrete change in the independent variable, calculated at the mean of the sample. T statistics are reported in parentheses. * $p<0.05$ ** $p<0.01$ *** $p<0.001$

Table 5B. Labor Force Participation by Demographics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All	Male	Female	Urban	Rural	Not near Reservation	On or near Reservation
AIAN alone	-0.0694***	-0.0772***	-0.0617***	-0.0686***	-0.0710***	-0.0687***	-0.0688***
	(-28.35)	(-24.73)	(-15.91)	(-22.20)	(-17.35)	(-15.14)	(-23.29)
AIAN & other race	-0.0669***	-0.0775***	-0.0561***	-0.0648***	-0.0722***	-0.0712***	-0.0559***
	(-21.65)	(-19.54)	(-11.49)	(-18.81)	(-10.32)	(-18.96)	(-10.28)
AIAN & Hispanic	-0.00213	-0.00985*	0.00450	-0.000620	-0.0158	-0.000975	-0.00308
	(-0.64)	(-2.44)	(0.81)	(-0.18)	(-1.16)	(-0.27)	(-0.37)
Hispanic	-0.000862*	0.0106***	-0.0124***	0.000662	-0.0192***	0.000315	-0.00875***
	(-2.27)	(23.30)	(-20.26)	(1.69)	(-11.84)	(0.78)	(-7.99)
Black	-0.0315***	-0.0676***	0.00788***	-0.0268***	-0.0735***	-0.0284***	-0.0562***
	(-45.19)	(-73.77)	(7.35)	(-36.33)	(-34.85)	(-38.16)	(-28.28)
Asian Pacific Islander	0.00155	0.0109***	-0.000693	0.00330**	-0.0221***	0.00287*	-0.00579
	(1.37)	(7.51)	(-0.41)	(2.85)	(-3.52)	(2.37)	(-1.77)
Other race	0.00286	0.0106	-0.00215	0.00515	-0.0416*	0.00523	-0.0217
	(0.60)	(1.81)	(-0.28)	(1.04)	(-2.08)	(1.04)	(-1.31)
Two or more races, non-AIAN	-0.00926**	-0.0174***	-0.000208	-0.00800**	-0.0266**	-0.00993**	-0.00569
	(-3.24)	(-4.80)	(-0.05)	(-2.69)	(-2.63)	(-3.06)	(-0.94)
Some College	0.0359***	0.0243***	0.0488***	0.0358***	0.0338***	0.0363***	0.0336***
	(96.40)	(54.97)	(80.31)	(89.02)	(33.94)	(89.05)	(36.38)
Associate degree	0.0550***	0.0310***	0.0767***	0.0541***	0.0558***	0.0549***	0.0544***
	(117.13)	(54.68)	(105.28)	(106.10)	(46.08)	(106.47)	(47.74)
Bachelor's+	0.0481***	0.0321***	0.0590***	0.0479***	0.0526***	0.0476***	0.0510***
	(146.03)	(85.39)	(101.12)	(136.26)	(54.50)	(133.39)	(59.07)
Potential Experience	0.000831***	-0.000978***	0.0129***	0.00102***	-0.000478*	0.00105***	-0.000531***
	(14.79)	(-13.38)	(24.98)	(17.37)	(-2.54)	(17.55)	(-3.32)
potexp2	-0.0000681***	-0.0000274***	0.00270***	-0.0000724***	-0.0000356***	-0.0000736***	-0.0000347***
	(-51.46)	(-16.02)	(32.01)	(-51.94)	(-8.37)	(-51.83)	(-9.46)
AIAN Alone * Bachelor's+	0.0591***	0.0729***	0.0432***	0.0584***	0.0438***	0.0528***	0.0555***
	(14.65)	(13.38)	(7.31)	(12.30)	(5.41)	(8.01)	(10.60)
AIAN & other race * Bachelor's+	0.0714***	0.0835***	0.0554***	0.0704***	0.0650***	0.0761***	0.0552***
	(17.18)	(15.23)	(8.83)	(15.65)	(5.29)	(15.49)	(6.91)
AIAN & Hispanic * Bachelor's+	0.0195***	0.0191**	0.0208*	0.0169**	0.0513*	0.0188**	0.0171
	(3.37)	(2.79)	(2.28)	(2.85)	(2.12)	(3.01)	(1.09)
Black * Bachelor's+	0.0403***	0.0724***	-0.00110	0.0369***	0.0622***	0.0379***	0.0602***
	(43.52)	(55.77)	(-0.82)	(38.30)	(15.35)	(38.80)	(19.75)
Asian * Bachelor's+	-0.0438***	-0.0289***	-0.0639***	-0.0443***	-0.0118	-0.0455***	-0.0259***
	(-34.52)	(-18.22)	(-33.42)	(-34.30)	(-1.42)	(-33.76)	(-6.60)
Other race, nonwhite, non-AIAN * Bachelor's+	-0.0292***	-0.0241**	-0.0362***	-0.0309***	0.0154	-0.0313***	-0.00403
	(-4.50)	(-3.07)	(-3.56)	(-4.67)	(0.53)	(-4.65)	(-0.17)
Two or more races, non-AIAN * Bachelor's+	0.00465	0.0162***	-0.0102*	0.00473	0.00791	0.00377	0.0119
	(1.42)	(3.87)	(-2.00)	(1.40)	(0.54)	(1.02)	(1.58)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,099,010	5,462,006	5,637,004	9,581,990	1,517,020	9,279,780	1,819,230

Note: Regressions are weighted using sampling weights provided by IPUMS. The reported coefficients are the estimated change in probability of employment associated with a discrete change in the independent variable, calculated at the mean of the sample. T statistics are reported in parentheses. * p<0.05 ** p<0.01 *** p<0.001

Table 6. Three Stage Simulation

Stage 1. Labor force participation	White, Non-Hispanic	AIAN Alone	AIAN Combined	AIAN & Hispanic	Black, Non-Hispanic	Hispanic
Actual LFP	0.832	0.699	0.731	0.774	0.776	0.798
N= 10,351,697	(0.374)	(0.459)	(0.443)	(0.418)	(0.416)	(0.401)
Predicted LFP	0.832	0.699	0.731	0.774	0.776	0.798
N= 10,351,697	(0.235)	(0.261)	(0.261)	(0.249)	(0.254)	(0.242)
Predicted LFP with Simulation	0.832	0.708	0.734	0.785	0.783	0.811
N= 10,351,697	(0.231)	(0.253)	(0.254)	(0.246)	(0.246)	(0.238)
Difference in Predicted LFP (White - group)	-	0.133	0.101	0.057	0.055	0.034
Simulation Difference in Predicted LFP (White - group)	-	0.124	0.098	0.047	0.049	0.020
Percent Unexplained by Education	-	0.933	0.971	0.812	0.884	0.599

Stage 2. Employment status	White, Non-Hispanic	AIAN Alone	AIAN Combined	AIAN & Hispanic	Black, Non-Hispanic	Hispanic
Actual Employment	0.941	0.870	0.887	0.895	0.879	0.921
N= 8,363,325	(0.235)	(0.336)	(0.316)	(0.307)	(0.326)	(0.269)
Predicted Employment	0.915	0.823	0.847	0.864	0.842	0.893
N= 10,351,697	(0.099)	(0.118)	(0.113)	(0.105)	(0.116)	(0.1)
Predicted Employment with Simulation	0.915	0.831	0.850	0.872	0.847	0.902
N= 10,351,697	(0.095)	(0.112)	(0.107)	(0.103)	(0.109)	(0.097)
Difference in Predicted Employment (White - group)	-	0.092	0.068	0.051	0.073	0.023
Simulation Difference in Predicted Employment (White - group)	-	0.085	0.065	0.043	0.068	0.013
Percent Unexplained by Education	-	0.921	0.955	0.842	0.929	0.577

Stage 3. Earnings	White, Non-Hispanic	AIAN Alone	AIAN Combined	AIAN & Hispanic	Black, Non-Hispanic	Hispanic
Actual Earnings	54,864.73	34,812.42	40,696.10	34,169.96	37,577.86	35,102.91
N= 7,962,282	(58,749.21)	(34340.53)	(41763.2)	(34872.12)	(35561.28)	(35367.38)
Predicted Earnings	46,777.18	30,873.21	36,669.28	30,580.49	33,374.96	30,794.28
N= 10,351,697	(19941.37)	(17648.8)	(18405.4)	(18576.99)	(18718.97)	(17851.42)
Predicted Earnings with Simulations	46,777.18	36,860.51	39,685.44	36,740.81	37,652.18	37,720.91
N= 10,351,697	(14785.75)	(15115.54)	(14964.16)	(15199.11)	(14690.65)	(14927.57)
Difference in Predicted Earnings (White - group)	-	15903.970	10107.900	16196.690	13402.220	15982.900
Simulation Difference in Predicted Earnings (White - group)	-	9916.670	7091.740	10036.370	9125.000	9056.270
Percent Unexplained by Education	-	0.624	0.702	0.620	0.681	0.567

LFP * Employment * Earnings	White, Non-Hispanic	AIAN Alone	AIAN Combined	AIAN & Hispanic	Black, Non-Hispanic	Hispanic
Actual	42,387.90	22,042.33	26,941.92	23,557.59	26,369.85	25,177.28
N= 10,351,697	(56959.24)	(32519.11)	(39661.01)	(33170.79)	(34791.01)	(34211.55)
Predicted	35,608.69	17,765.30	22,710.41	20,465.77	21,817.45	21,927.15
N= 10,351,697	(0)	(0)	(0)	(0)	(0)	(0)
Predicted with Simulation	35,608.69	21,669.72	24,767.58	25,163.40	24,970.36	27,612.21
N= 10,351,697	(0)	(0)	(0)	(0)	(0)	(0)
Difference in Predicted (White - group)	-	17843.390	12898.280	15142.920	13791.240	13681.540
Simulation Difference in Predicted (White - group)	-	13938.970	10841.110	10445.290	10638.330	7996.480
Percent Unexplained by Education	-	0.781	0.841	0.690	0.771	0.584