

# The Effects of DACAmentation: The Impact of Deferred Action for Childhood Arrivals on Unauthorized Immigrants

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## Abstract

As the largest immigration policy in 25 years, Deferred Action for Childhood Arrivals (DACA) made deportation relief and work authorization available to 1.7 million unauthorized immigrants. This paper looks at how DACA affects DACA-eligible immigrants' labor market outcomes. I use a difference-in-differences design for unauthorized immigrants near the criteria cutoffs for DACA eligibility. I find DACA increases the likelihood of working by increasing labor force participation and decreasing the unemployment rate for DACA-eligible immigrants. I also find DACA increases the income of unauthorized immigrants in the bottom of the income distribution. I find little evidence that DACA affects the likelihood of attending school. Using these estimates, DACA moved 50,000 to 75,000 unauthorized immigrants into employment. If the effects of Deferred Action for Parents of Americans and Lawful Permanent Residents (DAPA) are similar to DACA, then DAPA could potentially move over 250,000 unauthorized immigrants into employment.

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# 1 Introduction

The United States has the largest immigrant population of any nation in the world. With 40.7 million people,<sup>1</sup> the United States has four times as many foreign-born residents than any other country.<sup>2</sup> However, in the United States, 11.4 million of these individuals, or 3.6 percent of the entire US population, are unauthorized immigrants and have no legal status (Baker and Rytina 2013). These unauthorized immigrants face a unique set of challenges to their economic well-being compared to citizens and authorized immigrants. Some of these challenges include the threat of deportation, lack of legal work authorization, and insufficient documentation for banking, loans, and driver's licenses. These challenges likely contribute to unauthorized immigrants' below-average levels of income, educational attainment, and above-average levels of unemployment (Fortuny, Capps, and Passel 2007; Rivera-Batiz 1999; and Smith 2006).

Due to the unique challenges unauthorized immigrants face, extensive political debate has occurred over what immigration policies should be implemented to help improve unauthorized immigrants' economic well-being without incentivizing additional illegal immigration. On June 15, 2012, President Obama used his prosecutorial discretion and announced Deferred Action for Childhood Arrivals (DACA). This announcement directed the Department of Homeland Security to accept applications for DACA from unauthorized immigrants who had arrived in the United States as children (under the age of 16) and were under the age of 31 as of June 15, 2012. Individuals whose applications are accepted receive two years of deportation relief and work authorization. Continued DACA approval is conditional on renewal every two years. With 1.7 million unauthorized immigrants potentially eligible (Passel and Lopez 2012), DACA has provided relief from deportation and work authorization to more unauthorized immigrants than any other immigration policy since the 1986 Immigration Reform and Control Act (Baker 2014).

Without work authorization, documentation for loans and driver's licenses, and with the possibility of deportation, unauthorized immigrants have additional labor market frictions than do

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<sup>1</sup>Census Bureau

<sup>2</sup>United Nations, Department of Economic and Social Affairs, Population Division

authorized immigrants and citizens. DACA-eligible unauthorized immigrants could potentially reduce these labor market frictions and improve their labor market outcomes by applying for and obtaining DACA. Particularly, I use three different measurements of employment to look at how the reduction of labor market frictions through DACA has affected unauthorized immigrants likelihood of working. I estimate whether these changes in the likelihood of working stem from changes in labor force participation or unemployment. Importantly, I estimate how these changes in working affect the income of unauthorized immigrants throughout the income distribution. Lastly, I look at whether DACA affects schooling decisions through its substitutability with working.

In this paper, I look at how DACA affects DACA-eligible immigrants' labor market outcomes through the reduction of labor market frictions. To do so, I use American Community Survey (ACS) data on over 400,000 immigrants and 5 million citizens ages 18–35 from 2005 to 2014. I estimate the effect of DACA by using a difference-in-differences empirical design. To enhance validity, I estimate the effect of DACA by performing the difference-in-differences estimation for samples of unauthorized immigrants who are just above and below DACA eligibility cutoffs. Specifically, I look at unauthorized immigrants who were just above and below the age of 16 when they entered the United States and those who were just above and below the age of 30 on June 15, 2012. In addition, I test for selection into the ACS sample of unauthorized immigrants and for differential pre-trends that may bias the results.

I find DACA has had large effects on DACA-eligible individuals' labor market outcomes, and find suggestive evidence for some schooling decisions. For DACA-eligible individuals, DACA has increased the likelihood of working by 3.7–4.8 percentage points and the number of hours worked per week by 0.9–1.7 hours. The increase in the likelihood of working and in the number of hours worked per week comes from both an increase in labor force participation and a decrease in unemployment. These estimates provide a lower bound on the intent-to-treat effect of DACA which may be as much as 1.6 times larger. In addition, the increased likelihood of working has increased the income for those in the bottom of the income distribution. Despite the increased employment, I find little evidence that DACA has influenced the likelihood of an individual being

self-employed. Within two years of implementation, DACA moved 50,000–75,000 unauthorized immigrants into employment.

Since one of the requirements for obtaining DACA is to have a high school diploma or a General Educational Development (GED) certificate, I also test whether DACA had affected unauthorized immigrants' educational attainment. I find suggestive evidence that DACA pushed over 25,000 DACA-eligible individuals into obtaining their GED certificate in order to be eligible for DACA. Although working and attending school are likely substitutes, and DACA has had a positive effect on the likelihood of working, I find little evidence that DACA has affected the likelihood of attending school.

The difference-in-differences results directly answer the policy question of how DACA has affected its target population. The results also inform future immigration policies on how a reduction in labor market frictions through deferred action and work authorization might affect the larger unauthorized immigrant population. Particularly, the findings shed light on how the Deferred Action for Parents of Americans and Lawful Permanent Residents (DAPA) policy, which expands DACA and gives deferred action and work authorizations to most unauthorized immigrants who have children that are citizens, might affect the 3.7 million eligible unauthorized immigrants.<sup>3</sup> If the effects of DAPA are similar to the effects of DACA, then DAPA could move over 250,000 unauthorized immigrants into employment. However, due to the demographic differences between the DAPA-eligible and DACA-eligible populations, the effects of the two policies may not be similar. The results demonstrate illegal status hurts young immigrants' ability to work, by keeping them out of the labor force and unemployed. Even in a short two-year time span, deferred action and work authorization helped young unauthorized immigrants find employment.

Due to the recency of DACA and data limitations, little work has looked at how DACA affects unauthorized immigrants. A few studies using small sets of survey data have provided suggestive evidence of an increase in job changes, employment, and decreases in school attendance (Gonzales, Terriquez, and Ruszczyk 2014; and Kosnac et. al. 2014). However, these studies only

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<sup>3</sup><http://migrationpolicy.org/news/mpi-many-37-million-unauthorized-immigrants-could-get-relief-deportation-under-anticipated-new>

have a few DACA-eligible individuals in their sample and are mostly descriptive studies that lack causal identification. In concurrent work, Amuedo-Dorantes and Antman (2016) use monthly Current Population Survey data along with a difference-in-differences strategy to look at the effect of DACA. Although they effectively use their difference-in-differences strategy, their analysis is limited by a small sample size of 11,526 non-citizens of which only a small fraction are eligible for DACA after its availability (400–450 individuals). They find DACA reduces school enrollment for these 450 DACA-eligible individuals, and provide some evidence of an increase in the likelihood of working for men. The limited sample size prevents them from looking at labor market outcomes with enough precision to detect sizable changes. This paper uses over 400,000 non-citizens and over 5 million citizens to estimate the effect of DACA on labor market and schooling outcomes. Similar to Amuedo-Dorantes and Antman (2016), I find positive effects of DACA on employment for men. I also find positive effects of DACA on employment for women. In addition, I find beneficial effects of DACA on labor force participation, unemployment, and number of hours worked per week. I also find increases in income for those in the bottom of the income distribution. However, in contrast to their results, I find no evidence of an effect of DACA on school attendance. This difference in the effect on school enrollment may be due to sampling error from their small sample size or because of strong differential pre-trends in school attendance that are observed. In addition, this paper provides a detailed analysis of the effect of DACA by income quantile, uses citizens as an additional control group, and provides tests for sample selection that may potentially bias the results.

This paper is also closely related to work done on the 1986 Immigration Reform and Control Act (IRCA). The IRCA granted amnesty and a pathway to citizenship to approximately 2.8 million unauthorized immigrants (Baker 2014). Most studies have found the IRCA increased unauthorized immigrants' incomes (Bratsberg, Ragan, and Nasir 2002; Kossoudji and Cobb-Clark 2002; Orrenius and Zavodny 2012; and Rivera-Batiz 1999), decreased crime rates (Baker 2014), increased educational attainment (Cortes 2013), and had little effect on long-term patterns of undocumented immigration (Orrenius and Zavodny 2003). However, Amuedo-Dorantes and Bansak (2011) and

Amuedo-Dorantes, Bansak, and Raphael (2007) have also found that unauthorized immigrants' labor force participation decreased and unemployment rates rose. In addition to the IRCA, Kaushal (2006) found that the 1997 amnesty program, the Nicaraguan Adjustment and Central American Relief Act (NACARA), increased the real wages of undocumented foreign-born men from affected countries by 3 percent.

Although both are major immigration policies, the IRCA and DACA differ in many ways that may cause them to affect unauthorized immigrants differently. The largest difference is that the IRCA gave amnesty and a pathway to citizenship, whereas DACA gives only two years of deportation relief and work authorization. The IRCA was also implemented when fewer legal barriers to employing unauthorized immigrants existed. Lastly, the two policies are more than 25 years apart with different labor markets. NACARA was implemented on a much smaller scale than either the IRCA or DACA and was implemented over 15 years ago.

The rest of the paper will proceed as follows. Section 2 describes the timing, benefits, and eligibility criteria of DACA. Section 3 describes the ACS data. Section 4 develops a conceptual framework for interpreting the results. Section 5 describes the difference-in-differences methodology and the samples used for the analysis. Section 6 reports the results of how DACA affects eligible unauthorized immigrants. Section 7 discusses how the results can help inform current and future immigration policy. Section 8 concludes.

## **2 Deferred Action for Childhood Arrivals**

On June 15, 2012, from the Rose Garden, President Obama used his prosecutorial discretion and announced Deferred Action for Childhood Arrivals (DACA). This announcement directed the Department of Homeland Security to accept applications for DACA from qualified unauthorized immigrants. Individuals whose applications are accepted receive deferred action, which gives them two years of relief from deportation and work authorization. Continued DACA eligibility is conditional on renewal every two years.

After the announcement of DACA in June 2012, the Department of Homeland Security's Citizenship and Immigration Services (USCIS) started accepting applications for DACA on August 15, 2012. To apply for DACA, individuals have to fill out three forms, pay a processing fee of 465 dollars, and provide documentation that they meet the eligibility criteria. Although many forms and documentation are required, over 90 percent of processed applications are approved. The USCIS estimated applications would take 4–6 months to be processed. By the end of 2012, over 100,000 unauthorized immigrants' DACA applications had been approved. By the end of 2013 and 2014, over 500,000 and 600,000 DACA applications had been approved, respectively. Figure 1 uses data reported by the USCIS<sup>4</sup> and shows the number of DACA applications approved over time. The black line represents the number of DACA applications approved in each quarter of the year. The gray bars represent the cumulative number of DACA applications approved. As Figure 1 shows, very few DACA applications were approved until the last quarter of 2012, and the bulk of DACA applications were approved over the span of a year, from October, 2012 to September, 2013.

To qualify for DACA, unauthorized immigrants have to meet six criteria<sup>5</sup>: (1) applicants had no lawful status as of June 15, 2012 (i.e., an unauthorized immigrant as of June 15, 2012); (2) applicants came to the United States before the age of 16; (3) applicants must have been under the age of 31 as of June 15, 2012; (4) applicants must also have continuously resided in the United States since June 15, 2007; (5) applicants must be currently in school, have graduated or obtained a certificate of completion from high school, have obtained a General Education Development (GED) certificate, or be an honorably discharged veteran of the Coast Guard or Armed Forces of the United States; (6) applicants cannot have been convicted of a felony, significant misdemeanor, or three or more other misdemeanors. In addition to these DACA qualification criteria, an individual must be 15 years or older to submit the DACA application. To prove they meet these requirements, individuals must submit documentation from a list of approved sources given by the USCIS. For example, passports or birth certificates from an individual's country of origin are required to prove

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<sup>4</sup><http://www.uscis.gov/tools/reports-studies/immigration-forms-data/data-set-deferred-action-childhood-arrivals>

<sup>5</sup><http://www.uscis.gov/humanitarian/consideration-deferred-action-childhood-arrivals-daca>

an individual's age, and school or medical records are used to prove an individual came to the United States before the age of 16.

To better understand these criteria, a breakdown of the United States' unauthorized immigrant population is helpful. As of January 2012, the Department of Homeland Security estimated 11.4 million unauthorized immigrants were living in the United States (Baker and Rytina 2013). Of these, 80 percent were from Central and South America and 59 percent were from Mexico. Approximately 4.4 million of the 11.4 million unauthorized immigrants were under the age of 31 as of June 15, 2012. Of these 4.4 million, approximately 950,000 were immediately eligible for DACA (Passel and Lopez 2012). In addition, approximately 770,000 were potentially eligible in the future. Of these 770,000 individuals, 450,000 met all the qualification criteria but were currently under the age of 15. The other approximately 320,000 individuals met all the qualification criteria but had no high school diploma or GED certificate. Although individuals have to pay money, they may be wary of future deportation from applying, and must obtain substantial documentation, by the end of 2014, 67 percent of the 950,000 individuals immediately eligible for DACA had been approved.<sup>6</sup> The composition of DACA-approved individuals' nationality was somewhat similar to that of the unauthorized immigrant population as a whole, with 92 percent from Central and South America and 78 percent from Mexico.

Clearly, the reason for so many individuals willing to take the time and money to apply for DACA is the perceived benefits from DACA approval. The two most obvious, and likely the largest, benefits of DACA approval are relief from deportation and work authorization. Individuals with DACA receive deferred action in which all removal actions are deferred and individuals are authorized to be present in the United States. Along with this deferred action, DACA recipients are legally allowed to work in the United States. Many smaller benefits accompany these two main benefits. DACA recipients receive a Social Security Number, which allows them to legally open a bank account and build a credit history. In all states, except Arizona and Nebraska, DACA recipients can legally obtain a driver's license.<sup>7</sup> However, DACA recipients are not eligible for

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<sup>6</sup><http://www.uscis.gov/tools/reports-studies/immigration-forms-data/data-set-deferred-action-childhood-arrivals>

<sup>7</sup><http://www.nilc.org/dacadriverslicenses2.html>



federal welfare or federal student aid.

### **3 Data**

The main data used to look at the effects of DACA are individual-level data from the American Community Survey (ACS). I use ACS data from 2005 to 2014. I start with the 2005 ACS sample because it is the first year with a full one-percent sample of the United States. The 2014 ACS sample is the most recent sample available. The ACS data provide eight years of data prior to DACA and two years after. The collection of ACS data in each year is evenly distributed between each month of the year. The ACS provides many outcomes of interest including if individuals are working, in the labor force, unemployed, self-employed, their income, number of hours worked per week, whether they obtained a GED, and whether they are in school. It also provides a rich set of demographic information on individuals to be used as controls.

The ACS includes questions that allow me to focus on the unauthorized immigrant population and determine if individuals are DACA eligible. The most difficult DACA qualification criteria to identify in the ACS is whether the individual is an unauthorized immigrant. The ACS asks each individual if they are a US citizen. No additional information on legal status is available if the individual is a non-citizen. The Census Bureau and the Department of Homeland Security estimate that nearly 40 percent of these non-citizens are authorized immigrants (Acosta, Larsen and Grieco 2014, Baker and Rytina 2013). Although the variable non-citizen includes all unauthorized immigrants, it also includes many authorized immigrants. In the methodology section, I will discuss how this inclusion of authorized immigrants causes the analysis to underestimate the intent-to-treat effect of DACA.

These ACS data also include questions that allow me to identify individuals who meet the other DACA qualification criteria. The ACS question on quarter of birth allows me to determine the age of each individual as of June 30, 2012, and whether they are under the age of 31. Using the question on how long the individual has resided in the United States, along with their age, I

determine the age at which each individual entered the United States. This question also allows me to identify if the individual has been in the United States for at least five years. Using the ACS question on education, I can determine individuals' educational attainment. To limit the sample to only individuals who meet DACA's education requirement, I restrict my sample to only individuals who have a high school degree. Lastly, whether an individual has committed a felony or significant misdemeanor is not observed. I create the variable "eligible" for whether an individual meets all of the DACA qualifications as of June 15, in the year prior to the individual's ACS sample year (except for having committed a crime or not).

To better understand how unauthorized immigrants are included in the ACS data, the sampling process for the ACS is as follows. First, the Census Bureau uses its Master Address File, which is an inventory of all known housing units and group quarters, as the sample frame from which the Census Bureau draws its sample for the ACS. The Census Bureau estimates that from 2005 to 2014, the Master Address File covers the housing for 92.5–94.0 percent of the entire US population. Each month, a systematic sample of addresses is drawn from the Master Address File to represent each US county. The ACS survey is then mailed to the selected sample at the beginning of the month. Nonrespondents are then contacted by telephone one month later for a computer-assisted telephone interview. One third of the nonrespondents to the mail or telephone survey are then contacted in person to complete the ACS survey one month following the telephone survey attempt. The Census Bureau reports that from 2005 to 2014, 65.5–68.7 percent of the addresses selected for the sample completed the survey. Of those contacted in person, 96.7–98.0 percent completed the survey.

In addition to the details of the ACS sampling procedure, understanding how the sampling and interview process relate to being an unauthorized immigrant is important. In regards to the ACS and unauthorized immigrants, the Census Bureau states, "The ACS interviews the resident population without regard to legal status or citizenship."<sup>8</sup> The fact that the ACS conducts interviews without regard to legal status can be more easily seen as the sampling and interview process is broken down. First, because the sample frame is created by using the near universe of US ad-

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<sup>8</sup><https://www.census.gov/history/pdf/acsdesign-methodology2014.pdf>

dresses, unauthorized immigrants are no more or less likely to be selected into the sample frame than are authorized immigrants or citizens. Second, because a systematic sample of addresses are drawn from the sample frame, unauthorized immigrants are no more or less likely to be selected to be sent the ACS survey. Therefore, the ACS sampling does not select a specific type of unauthorized immigrant to be included in the ACS, but is representative of the unauthorized immigrant population in the United States. The ACS sampling procedure supports the assertion that the estimates from this paper are informative about DACA-eligible unauthorized immigrants as a whole. Also, because the sampling procedure did not change between 2005 and 2014, and unauthorized immigrants were sampled in the same way before and after DACA became available, the selection of unauthorized immigrants into the sample will not affect the results. Although the ACS did not sample a specific type of unauthorized immigrant or change its sampling procedure in such a way to detrimentally affect the results, potential concerns arise regarding how the survey and item response rates of unauthorized immigrants may affect the results. I discuss these concerns in the results section along with tests to determine their potential influence on the results.

Using the ACS data, I analyze four main types of labor market and schooling outcomes. The first outcome is the likelihood of an individual to be working. The ACS provided three survey questions that help measure this outcome. They are a binary variable for whether an individual worked in the last week and in the last year, and a continuous variable for the usual number of hours worked each week. All three of these outcome variables provide insight into whether a person is working. The second type of outcome comprises three outcome variables that help describe the underlying reason for why a person is working or not. These three outcome variables are a binary variable for whether an individual is in the labor force or not, whether unemployed or not, and whether self-employed or not. These three outcomes variables help break down how DACA is affecting the likelihood of working. The third type of outcome is an individual's income. The ACS income variable measures the total amount of income an individual receives from all sources in the last 12 months. This outcome variable is used to help determine if DACA improves recipients' economic well-being and stability. The last type of outcome comprises two variables that help

describe the schooling choices of individuals. The outcome variables used are whether an individual is attending school and whether the individual has obtained a GED. I use the binary outcome variable of whether an individual is attending school, because working and attending school are likely substitutes for each other and DACA may have unattended effects on an individual's likelihood of attending school. I use the binary outcome variable of having obtained a GED, because a requirement for obtaining DACA is to have a high school diploma or a GED certificate, and DACA may therefore incentivize some unauthorized immigrants to obtain their GED. The exact wording from the ACS survey for each outcome and control variable is shown in the web appendix.

Table 1 shows the summary statistics for the sample of non-citizens ages 18–35 with at least a high school degree from 2005 to 2014. The first two columns show the summary statistics for the DACA-eligible and DACA-ineligible individuals, respectively. The third column shows the difference between the two groups' means and the fourth column shows the t-statistic when testing the difference between the two means. The clearest differences between the two groups are that the DACA-eligible group tends to have entered the United States at a younger age and to be younger. In addition to the difference between the DACA-eligible and DACA-ineligible groups that can be seen in Table 1, both groups are more likely to be Hispanic, speak Spanish at home, live in a metro area, and have only a high school degree, compared to citizens of the same age (see Table A.3). In addition, both groups are about 6 percentage points less likely than citizens to be in the labor force or to be working. Although DACA-eligible individuals' incomes are much lower than citizens, DACA-ineligible individuals' incomes are similar to citizens.

## **4 Conceptual Framework**

In this section, I will look at the reasons why obtaining DACA may potentially affect the labor market and schooling outcomes of unauthorized immigrants and the potential consequences of these effects. First, I look at why obtaining DACA potentially affects unauthorized immigrants' labor market outcomes. Initially, DACA itself did not change the labor demand or the labor sup-

ply curves. DACA did not change employers' desire to hire a worker at a given wage. In addition, DACA did not change individuals' (citizens, authorized immigrants, and unauthorized immigrants) willingness to work at a given wage. However, DACA did reduce the frictions for DACA-eligible unauthorized immigrants to find employment, by providing work authorization, legal documentation for banking and driver's licenses, and removing potential deportation if discovered working illegally. These attenuations in frictions mainly arose from that fact that unauthorized immigrants who obtained DACA could now obtain employment from all potential employers instead of just employers who were willing to overlook individuals' legal work status. These attenuations in frictions allowed those who obtained DACA to have fewer barriers to working and to have more employment options. As such, one would expect DACA to increase individuals' likelihood of working. This increase in the likelihood of working could arise from both discouraged workers entering the labor force and unemployed unauthorized immigrants finding employment. This increase in working should in turn increase DACA-eligible unauthorized immigrants' income. This increase in income should be particularly pronounced for those in the bottom of the income distribution due to not being able to previously find steady employment. The results of this paper will test if these reductions in labor market frictions for DACA-eligible unauthorized immigrants allows them to improved their labor market outcomes by being more likely to work, less likely to be unemployed, and by increasing their income.

Note that although DACA itself does not change the labor supply curve and instead attenuates labor-market frictions for DACA-eligible individuals, if these frictions are attenuated and those who obtain DACA increase their likelihood of working, the supply of labor will in turn increase. This increase in the supply of labor could potentially have a negative effect on overall wages. The results indicate DACA moved approximately 50,000–75,000 unauthorized immigrants into employment. This change in the supply of labor accounts for only 0.94–1.41 percent of the 5.33 million individuals who gained employment in 2013 and 2014 (Bureau of Labor Statistics). This finding implies the effect of DACA on overall wages would likely be very small and would be unable to be detected in these data. However, with the much larger population that would be

affected by DAPA or a large-scale amnesty program, the increase in the supply of labor may be a larger concern.

These attenuations of labor market frictions and the subsequent increase in the supply of labor have potential welfare implications. By reducing labor market frictions for unauthorized immigrants and therefore increasing their employment options, DACA clearly increases the welfare of DACA-eligible individuals. However, the increase in labor supply and the potential decrease in overall wages, may lead to a decrease in the welfare of citizens and authorized immigrants. However, the welfare increases and decreases are not likely to be symmetric. Because DACA relieves large frictions for DACA-eligible unauthorized immigrants, the resulting increase in employment is likely for individuals who are not at the margin of being willing to work, but rather are well within the margin of being willing to work. Conversely, if the increased supply of labor from DACA-eligible individuals displaces workers, these displaced workers are likely to be just at the margin of being willing to work. This would imply the overall welfare effect is not a pure transfer to DACA-eligible individuals, but would likely enhance efficiency, although it would not be Pareto efficient.

In addition to labor market outcomes, I look at why obtaining DACA may potentially affect individuals' schooling outcomes. First, I look at the potential effect of DACA on attending school, and then the potential effect on obtaining a GED. The additional options from obtaining DACA may have a direct positive effect on the likelihood of attending schooling through legal documentation that gives immigrants access to loans to pay for tuition, the ability to obtain a driver's license so they can attend school while still living with their parents, or the ability to work while attending school to cover their tuition and living expenses. In addition, by obtaining assurance through DACA of being able to legally work in the future, DACA-eligible individuals may be more willing to invest in their human capital. However, besides these potential positive effects of DACA, work authorization has an indirect negative effect on school attendance. Working and attending school (particularly attending full time) are likely substitutes for each other. Once DACA-eligible individuals obtain DACA and can more easily find employment, they may substitute their time away

from attending school and toward working. Second, because one of the requirements for obtaining DACA is to have a high school diploma or a GED certificate, DACA may directly incentivize unauthorized immigrants who do not have a high school diploma or GED, but are otherwise eligible for DACA, to obtain a GED so they can reap the potential benefits of DACA. The results look at whether DACA affects both the likelihood of attending school and of obtaining a GED.

## 5 Empirical Method

To measure the effect of DACA, I use a difference-in-differences (DID) approach. By comparing DACA-eligible individuals with DACA-ineligible individuals before and after the implementation of DACA, I can measure its effect. The simplest approach to test if DACA has an effect on DACA-eligible individuals is by comparing the outcome means of individuals eligible for DACA with those ineligible both before and after DACA became available. Figures 2 through 5 show these simple mean comparisons between non-citizens ages 18–35 with at least a high school degree from 2005 to 2014. With DACA only being available at the end of 2012, I should only observe its effect for the years 2013 and 2014, with possibly a small effect in 2012. I discuss the results shown in these figures in detail in the results section.

As mentioned earlier, one of the limitations with the ACS data is the inability to distinguish between unauthorized and authorized non-citizens. According to the Census Bureau (Acosta, Larsen, and Grieco 2014), the ACS estimates there were 8.3 million non-citizens in the US between the ages of 18 and 35 in 2012. The Department of Homeland Security (Baker and Rytina 2013) estimates that of these 8.3 million non-citizens, 38.9 percent were authorized immigrants and 61.1 percent were unauthorized immigrants. If the sample were restricted to just unauthorized immigrants, the DID estimates would be the intent-to-treat effect. However, due to this contamination of authorized immigrants in the non-citizen sample, the DID estimates are not be the intent-to-treat effect. Instead, the DID estimates will be systematically biased towards zero and will underestimate the intent-to-treat effect. With nearly 40 percent of the non-citizen sample being authorized

immigrants, the intent-to-treat effect of DACA will be approximately 1.6 times larger than the estimates from the DID estimation. When the estimation is performed on subsamples of the data that tend to have a higher percentage of unauthorized immigrants, such as low-income and low-education subsamples (Passel and Cohn 2009), the DID estimates are larger. However, these larger estimates may also be because unauthorized immigrants in these subsamples benefit more from obtaining DACA. Similarly, sampling error that incorrectly specifies the DACA-eligible variable would also bias the estimates toward zero. The DID estimates will provide a lower bound for the intent-to-treat effects of DACA. In addition, because only 67 percent of DACA-eligible individuals obtained approval, the treatment on the treated effects could potentially be as much as 1.5 times larger than the intent-to-treat effects. However, any treatment on the treated effect derived from the DID estimates could be biased by selection into who applies for DACA.

The main analysis for this paper simultaneously uses a DID approach along with some regression discontinuity design elements. I will use the DID approach on samples with individuals just above and below different DACA qualification criteria. The main model is as follows:

$$Y_{it} = \beta_0 + \beta_1 \text{Eligible}_{it} * \text{After}_{it} + \beta_2 \text{Eligible}_{it} + \beta_3 \text{After}_{it} + \beta_4 X_{it} + \beta_5 W_{it} + \theta_t + \gamma_s + \gamma_{st} + \varepsilon_{it} \quad (1)$$

where  $Y_{it}$  is the outcome variable of interest (e.g., working, unemployed, in school, etc.) for individual  $i$  in year  $t$ . The variable  $\text{Eligible}_{it}$  is a binary variable equal to one if individual  $i$  is eligible for DACA, and zero if ineligible. The creation of this variable was described in the data section. The variable  $\text{After}_{it}$  is a binary variable equal to one if it is after DACA became available, and equal to zero if before. Since the ACS only reports the year in which the interview is performed, I use the cutoff between 2012 and 2013 as the threshold for when DACA became available. Therefore,  $\text{After}_{it}$  is equal to one if the year is 2013 or 2014 and zero if the year is from 2005 to 2012. The parameter of interest,  $\beta_1$ , is the coefficient on the interaction term between  $\text{Eligible}_{it}$  and  $\text{After}_{it}$ . The vector  $X_{it}$  contains demographic controls including years of education, sex, race, ethnicity, marital status, and state-level unemployment rates. The vector  $W_{it}$



non-parametrically controls for the eligibility criteria by including fixed effects for individual  $i$ 's age and age when arrived in the United States. The vectors  $\theta_t$  and  $\gamma_s$  allow for time and state fixed effects, respectively. Lastly,  $\gamma_{st}$  allows for state-specific time trends. When estimating equation (1), standard errors are clustered at the state-year level.

I estimate this DID model on four different samples. The first sample includes all non-citizens ages 18–30 with at least a high school degree who entered the United States between the ages of 12 and 19. The cutoff for DACA eligibility was entering the United States before the age of 16. This sample allows a DID estimate to be obtained for individuals near the DACA age cutoff for entering the United States (four years above and below the cutoff) and therefore uses the variation in eligibility due to when an individual entered the United States. The second sample includes all non-citizens ages 27–34 with at least a high school degree who entered the United States before the age of 16. Because the cutoff for DACA eligibility was being under the age of 31, this sample captures the variation in eligibility due to the age criterion. Third, the DID model is estimated without any regression discontinuity element. This last sample includes all non-citizens ages 18–35 with at least a high school degree and therefore uses all sources of variation in DACA eligibility. This sample is more akin to a typical DID estimation that relies heavily on the pre-trends of the two groups being similar, although the two groups may not be similar. The last sample the DID model is estimated on includes all citizens and non-citizens ages 18–35 with at least a high school degree.

The parameter of interest in all specifications is the coefficient on the interaction term between  $Eligible_{it}$  and  $After_{it}$ . This coefficient estimates the change in the outcome variable for individuals eligible for DACA after DACA became available compared to those ineligible for DACA. The main assumption that must hold in order for the estimates to be unbiased is that the DACA-eligible and -ineligible groups have parallel trends, and the parallel trends would have continued in the absence of DACA. To support the assumption of parallel trends, I test for pre-existing trends. In addition to the test for pre-existing trends, the trends can be seen in Figures 2 through 5. Lastly, using the two samples of individuals just above and below the DACA criteria cutoffs, near the age of 30 and

near the age of 16 when entering the United States, increases the likelihood that the eligible and ineligible groups are similar and have parallel trends.

One potential concern for the interpretation of the DID estimates is that some unauthorized immigrants may not have the required money or may worry that obtaining DACA will increase the future likelihood of being deported, and therefore unauthorized immigrants who obtain DACA may be a specifically selected type of unauthorized immigrant. Because a large portion (67 percent) of DACA-eligible individuals applied and obtained DACA, this concern is somewhat limited; however, the two thirds who obtain DACA may still be substantially different from the one third who did not. This concern will not affect the main policy implications of the results, because this concern does not affect the DID estimates. The DID estimates will still estimate the effect of how DACA affected DACA-eligible unauthorized immigrants regardless of whether they obtained DACA, and still be a lower bound on the intent-to-treat effect. However, this concern could potentially bias any treatment on the treated effects derived from these DID estimates. If a program with permanent deportation relief and work authorization were implemented such that immigrants were not concerned about future deportation and a higher percentage of eligible unauthorized immigrants who applied for and obtained deportation relief, then the treatment on the treated effects from such a program may be larger or smaller.

## **6 Results**

### **6.1 Graphical Results**

In this section, I compare the outcome means of individuals eligible for DACA with those ineligible both before and after DACA became available. Each point in Figures 2 through 5 shows the difference in the mean for individuals eligible for DACA and those ineligible. The simple DID estimates without controls that account for differential pre-trends are reported in each graph. The sample includes all non-citizens ages 18–35 with at least a high school degree (for alternative samples, see Figures A.1–A.12). Because DACA became available at the end of 2012, its effects

should be observed in the years 2013 and 2014. The effects are likely to be larger in 2014 than 2013 because a large portion of individuals would not have received approval before being surveyed in 2013.

The first graph in Figure 2 shows the difference in means for the fraction of individuals working. This graph shows similar pre-trends from 2005 to 2012, with the difference in means remaining relatively stable. However, once DACA became available, this difference increased by 6.3 percentage points from 2012 to 2014. The results for the fraction who worked in the past 12 months and the usual number of hours worked per week are similar and show substantial increases in employment for those eligible for DACA compared to those ineligible once DACA became available.

This effect of DACA on employment can come from either changes in labor force participation or unemployment. The results for the fraction in the labor force in Figure 3 are similar to the results from the fraction working with similar pre-trends followed by increases in labor force participation in 2013 and 2014. The pre-trends in being unemployed are less similar, but there are still significant drops in the difference in unemployment in 2013 and 2014, respectively. The fraction of individuals self-employed shows little evidence that DACA had an impact on the likelihood of being self-employed.

The first graph in Figure 4 shows the difference in income between DACA-eligible and -ineligible individuals. A strong differential pre-trend in income appears for the two groups prior to the availability of DACA. The difference in the mean income declines from 2005 to 2013, followed by a small uptick in 2014 that is not statistically significant. Part of this slow response for income may occur because the ACS measures income by asking individuals their income over the past 12 months. Because DACA recipients in 2013 could only have had their DACA approval for at most a year (and likely much less) and because many DACA recipients in 2013 would have been interviewed before obtaining DACA approval, this income measure may underestimate the effect of DACA on income. However, the strong differential pre-trends appear to be driven by the top 10 percent of the income distribution. The second graph restricts the sample to the bottom 90

percent of the income distribution, and the pre-trends for the two groups are much more stable. For the bottom 90 percent in the income distribution, there is a 1,364 dollar increase in income for DACA-eligible individuals compared to those ineligible between 2012 and 2014. Also, although an imperfect measure, the third graph shows the difference in the log of income plus one and finds large increases in log income once DACA became available.

In Figure 5, the pre-trends for the fraction in school are different for the two groups. There is also no clear change in the mean difference when DACA becomes available. The fraction with a GED shows the mean difference in the fraction of individuals with a GED. The ACS first started asking this question in 2008, so the graph only covers the years 2008–2014. There is no clear change in the mean difference in GED obtainment once DACA became available.

To better look at the effect of DACA on GED attainment, I also use annual data from the GED Testing Service<sup>9</sup> on the fraction of GED tests that were taken in Spanish and by Hispanics each year. Data for the GED end in 2013 because the 2002 Series GED Test expired at the end of 2013. From 2004 to 2011, the fraction of GED tests administered in Spanish ranged from 3.8 percent to 4.4 percent. However, from 2011 to 2013, the fraction of GED tests administered in Spanish increased 2.1 percentage points. This increase implies that over 13,000 more individuals took the GED test in Spanish in 2013 than in 2011. In Panel B, the fraction of GED tests that were administered to Hispanics from 2004 to 2011 monotonically increases from 18.1 to 20.4 percent. However, contrary to what would be predicted, there is a substantial drop in 2012 to 16.7 percent. Then, as predicted, there is a large increase in 2013 to 24.9 percent. The 4.5-percentage-point increase from 2011 to 2013 is the equivalent to an additional 27,000 Hispanics taking the GED test in 2013 as compared to 2011. However, this result should be interpreted cautiously because of the dip that occurs in 2012 and the null effect in the ACS data.

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<sup>9</sup><http://www.gedtesting-service.com/educators/historical-testing-data>

## 6.2 Difference-in-Differences Results

Moving from the simple approach to a more sophisticated approach, I estimate equation (1). I perform this estimation separately for the four different samples described in the empirical methods section. Table 2 reports the estimates from equation (1) for each of the four samples. Panel A of Table 2 reports the estimates from the sample that includes all non-citizens ages 18–30 with at least a high school degree who entered the United States between the ages of 12 and 19. This sample performs a DID estimation on individuals near the DACA-criteria cutoff for the age at which individuals entered the United States. The column headers indicate the outcome variables of interest that were described in the data section. The first row reports the coefficient on the interaction term between  $Eligible_{it}$  and  $After_{it}$ . The second row reports the coefficient on  $Eligible_{it}$ .

Column 1 indicates that non-citizens eligible for DACA are 4.8 percentage points more likely to be working than non-citizens ineligible for DACA after DACA became available. In other words, DACA increases the likelihood of working by 4.8 percentage points for non-citizens who meet the DACA requirements. With a base of 65 percent of DACA-eligible individuals working, the estimate implies DACA increases the likelihood of a DACA-eligible individual working by 7.3 percent. Both of these estimates are lower bounds on the intent-to-treat effect. Because approximately 40 percent of the non-citizen sample are authorized immigrants, the intent-to-treat effects are likely 1.6 times larger than DID estimates. Therefore the intent-to-treat effect of DACA on the likelihood of working could be as large as 7.7 percentage points, or 11.7 percent.

The increase in the likelihood of working can come from two different sources. The first source is individuals entering the labor force. The second is individuals moving from unemployment to employment. Columns 2 and 3 look at these two different sources separately. Column 2 shows DACA increases the likelihood of a DACA-eligible individual being in the labor force by 3.7 percentage points. Column 3 shows that for DACA-eligible individuals, DACA decreases the likelihood of being unemployed by 1.9 percentage points. From these estimates, DACA appears to move eligible individuals into the labor force and move them from unemployment to employment.

Column 4 shows that although DACA increases the likelihood of working, there is little evi-

dence it had an effect on DACA-eligible individuals' income for the sample as a whole. However, as was seen in Figure 4, DACA appears to have an effect on income for individuals in the bottom of the income distribution or when less weight is placed on the upper tail of the income distribution. As such, I estimate the DID estimates using quantile regressions over the income distribution. Figure 7 shows the results of this quantile regression for both income and the log of income plus one. Because just over 25 percent of individuals have zero income, estimates are not available for the lower quarter of the income distribution. As can be seen, DACA appears to have increased the income of those between the 30th and 60th percentile by 400–800 dollars or about 5–20 percent. DACA appears to have had little effect on those in the top of income distribution.

Columns 5 and 6 use two different measures for working. Column 5 indicates DACA-eligible individuals work 1.7 hours more per week than DACA-ineligible individuals after DACA became available. This increase can also be thought of as one additional full-time job per 23 DACA-eligible individuals. Column 6 indicates that DACA-eligible individuals are 3.9 percentage points more likely to have worked in the past 12 months. Column 7 tests whether DACA approval moves individuals from self-employment to the formal labor market. I find no statistically significant affect of DACA on self-employment.

Columns 8 and 9 look at academic attainment. Column 8 finds DACA decreases the likelihood of attending school for DACA-eligible individuals by 2.1 percentage points. This effect is statistically significant; however, the effect is likely biased due to the differential pre-trends in schooling between the DACA-eligible and -ineligible groups that can be seen in Figure 2. Once I test for pre-trends in Table 3, the effect on schooling is indistinguishable from zero. Column 9 looks at the effect of DACA on the likelihood of having attained a GED certificate. DACA does not appear to have an effect on the number of individuals that have attained their GED.

Panels B, C, and D of Table 2 show analogous results for three additional samples. Panel B shows the results for non-citizens with at least a high school degree who are ages 27–34 and entered the United States before the age of 16. This sample includes individuals who are just above and below the age cutoff for DACA eligibility (must be under 31) but meet all other DACA eligibility

requirements. The results for the individuals near the age cutoff are quite similar to the results found in Panel A. The notable difference in Panel B is that there is no statistically significant effect on schooling. Panel C includes all non-citizens with at least a high school degree who are ages 18–35. Instead of using variation in DACA eligibility that comes from being just above or below a DACA criteria cutoff along with the DID methodology as does Panel A and B, this sample only uses the DID methodology. Panel D includes all citizens and non-citizens with at least a high school degree. The results from this sample are qualitatively the same; however, the estimates tend to be smaller. These smaller estimates are likely due to the stronger differential pre-trends for this sample. Once these differential pre-trends are accounted for, the estimates for this sample are similar in magnitude to those of the first three samples (see Table A.6).

### **6.3 Potential Concerns**

A major concern about the empirical method used is the possibility of differential trends in the outcome variables for DACA-eligible and -ineligible individuals. Figure 2 looks at this assumption graphically, but further analysis is performed in Table 3. Table 3 estimates equation (1) with the variable  $Eligible_{it}$  interacted with a binary variable for each year. The interaction with the 2012 binary variable is the omitted interaction. If differential trends are a problem, the coefficients on the interaction terms leading up to 2013 and 2014 should be statistically significant and in the same direction as the coefficients on the 2013 and 2014 interaction terms. When testing for pre-trends, statistically significant effects remain for working, labor force, unemployment, hours worked per week, and worked in the past year. These point estimates vary in magnitude compared to the estimates in Table 2 but tend to be qualitatively similar. School attendance is no longer affected, likely due to the clear pre-trends for school attendance. However, there does not appear to be clear pre-trends for the other outcomes. Analogous to Table 3, Tables A.4, A.5, and A.6 show the pre-trends results for the samples in Panels B, C, and D of Table 2, respectively. Because 2012 was an election year in which immigration policy was a major topic of conversation, unauthorized immigrants may have been concerned about possible future immigration policies and therefore

underinvested in work and education in 2012. If this were true, then the effects could be biased when they are compared to the omitted 2012 interaction. Tables A.18–A.21 show the pre-trends when the 2011 interaction is the omitted interaction. The effects are very similar regardless of which year is used as the omitted interaction.

Another potential concern for the identification strategy is the possibility that individuals change how they respond to the ACS after they receive DACA. Unauthorized immigrants may be more willing to answer (or truthfully answer) the citizenship question once they have obtained DACA. Also, because working without proper documentation is illegal, undocumented workers may be hesitant to respond to questions about employment. Once they receive legal status and work authorization through DACA, they may change their survey-response behavior and be more likely to respond to citizenship and employment questions. Thus, instead of DACA actually increasing recipients' likelihood of working, it may just increase recipients' likelihood of reporting on the ACS survey that they worked. Using the quality flags in the ACS, I am able to test if the availability of DACA changes the likelihood of DACA-eligible individuals responding to particular questions. To do so, I use the DID estimation shown in equation (1) with the outcome variable,  $Y_{it}$ , as an indicator variable equal to one if the survey question for the outcome variable of interest was not answered and the outcome variable of interest was imputed by the ACS. The indicator variable is equal to zero otherwise. Table 4 reports the coefficients on the interaction term and on the DACA-eligible variable for the estimation performed. If the availability of DACA increases the likelihood of DACA-eligible immigrants responding to an ACS survey question, the coefficient on the interaction term should be negative and statistically significant. As Table 4 shows, for all of the outcome survey question, the coefficient on the interaction term is close to zero and none are statistically significant. This finding would indicate DACA-eligible immigrants did not change their survey response behavior very much after DACA became available and is likely not driving the positive effects on employment. Analogous to Table 4, Tables A.8, A.9, and A.10 show the results for the samples in Panels B, C, and D of Table 2, respectively.

One potential concern is that although all unauthorized immigrants are equally likely to be



sampled, unauthorized immigrants that complete the ACS may be different from those who do not complete the ACS, and DACA affects the type of unauthorized immigrants who complete the ACS differently than those who do not complete the ACS. Although the ACS does not ask about an individual's legal status, some unauthorized immigrants might be more wary of completing a government survey. Alternatively, because completing the ACS is required by law, some unauthorized immigrants may be more inclined to fill out the ACS. If the group that is more inclined to answer the survey is also affected differently by DACA, the generalizability of the results may be affected. This concern will not affect the internal validity of the results, but may limit how much the results can be generalized to the DACA-eligible population as a whole. This is a possible concern because from 2005 to 2014, 65.5–68.7 percent of the addresses that were sent the ACS survey completed it. However, for the one third of the nonrespondents that were randomly assigned to be contacted in person, 96.7–98.0 percent completed the survey. Because nearly all households complete the ACS survey if selected to be contacted in person, little to no selectivity of individuals into this subsample will take place based on their willingness to fill out the ACS survey. I estimate the main results using this subsample and report the results in Table A.7. The results from this subsample, in which selection on the willingness to complete the ACS is minimal to nonexistent, are very similar to the main results. This finding implies that either no selection occurs in the willingness of unauthorized immigrants to complete the ACS, or DACA does not differentially affect this type of unauthorized immigrants. Either way, this finding suggests that the results from the ACS are likely generalizable to the population of DACA-eligible unauthorized immigrants as a whole.

An additional potential concern for the identification strategy is the possibility that individuals' likelihood of completing the ACS changes after they receive DACA. If unauthorized immigrants' willingness to complete the ACS changes once they received DACA, the composition of individuals in the DACA-eligible group might change and bias the results. Similar to the previous concern, the results from Table A.7 show that when the sample is restricted to a subsample for which the survey-completion rate is over 95 percent and therefore there is little room for a compositional change to those included in the DACA-eligible group, the estimates for the effect of

DACA are very similar. This finding implies that little change occurs in the composition of the DACA-eligible group and little to no bias to the results. In addition, I test whether the observable characteristics for the DACA-eligible group change once DACA became available in 2013. Due to strong pre-trends in observable characteristics, I use the same specification as the pre-trend tables without controls to test whether 15 different observable characteristics changed between 2012 and 2013. Table A.11 reports the coefficient on the interaction term between 2013 and being DACA eligible, with the 2012 interaction omitted. Of the 60 different coefficients estimated for the 15 observable characteristics and the 4 different samples, only 7 of the 60 coefficients are significant at the 90 percent confidence level. This test indicates that there is little evidence of a change in the observable characteristics of the DACA-eligible group after DACA became available. This test implies that receiving DACA did not change individuals' willingness to complete the ACS or the composition of the DACA-eligible group. Therefore, this concern would likely have little to no effect on the results.

Lastly, a potential concern is that DACA recipients are switching from informal to formal jobs and the estimates are measuring this switching and not actual labor market effects. One benefit of the ACS data is that the main question used to determine whether someone is working includes work that was formal or informal. The wording of the question is as follows: "LAST WEEK, did this person do ANY work for pay." This wording allows both formal and informal work to be included, and therefore the effects of DACA can be seen on all types of work. The questions about whether an individual worked last year and the hours worked per week also ask about all work, whether formal or informal. In addition, the ACS also determines whether a person is self-employed. This question allows me to look at the effect of DACA on any potential movement from self-employment (more likely an informal job) to working for someone else (more likely a formal job). The results show little evidence of an effect on changes in self-employment. The ACS also asks for the occupation of individuals who have worked in the past five years. Using this variable, I estimate the main results for more formal occupations (e.g., teacher, software developer, retail clerk, etc.) and more informal occupations (e.g., cook, waitress, landscaper, child care worker,

etc.). Due to the omission of individuals who may start working for the first time in five years because of obtaining work authorization through DACA, the estimates from this heterogeneity test will likely be biased. However, if the estimates for individuals with a formal occupation are similar to those with an informal occupation, individuals just switching from informal to formal jobs are unlikely to be driving the main estimates. Tables A.22–A.25 report this heterogeneity test for each of the samples. The results show little evidence of a difference between the estimates for formal and informal occupations. The results of this test imply that the main results are likely not being driven by individuals just switching from informal to formal jobs.

## **6.4 Subsample and Robustness Results**

Tables 5–8 use the sample and specification from Panel A of Table 2 to look at how the results differ for different subsamples of income, ethnicity, gender, and education. These results look to see if particular subsamples are more or less affected by DACA, and look at how sensitive the results are to the exclusion of particular groups of individuals. Tables A.12, A.13, and A.14 show the subsample results for the samples in Panels B, C, and D of Table 2, respectively.

Table 5 shows the results for individuals below the median income, above the median income, and below the 90th percentile of the sample. Two notable differences exist between the subsamples. First, for individuals below the median and below the 90th percentile, the beneficial effects of DACA are larger. The main effects on working, labor force participation, and unemployment are about twice as large as those for the above-the-median-income subsample. Second, for individuals below the median income, DACA increased the income of DACA-eligible individuals by a statistically significant 339 dollars.

Table 6 shows the results for the subsample of individuals who identify as Hispanic and for the subsample of Mexicans. The results are fairly similar in both magnitude and sign to the main results in Table 2. This similarity is important, because approximately 78 percent of DACA recipients were Mexican. They indicate a positive effect of DACA on working, labor force, hours worked per week, and worked in the last year for both Hispanics and Mexicans. The results also show a

negative effect on unemployment.

Table 7 shows the results separately by gender. I find no statistically significant differences in the coefficients between men and women. The coefficients are both of similar magnitude and sign to the main results in Table 2. Table 8 shows the results separately by education level. The results in Panel A are for individuals with a high school degree or some college, and are similar to the main results found in Table 2. The results in Panel B are for individuals with a college degree or more, and are similar in sign yet smaller in magnitude. Due to a much smaller sample size and much larger standard errors, these results are at most marginally significant.

In addition to the sensitivity analysis performed by looking at different subsamples, Table 9 looks at the robustness of the results to different choices of specification. Each row represents a different specification or sample and each cell in the row is the coefficient on the interaction term along with its standard error. Panel A of Table 9 estimates equation (1) with varying levels of controls. Row 1 contains no controls and only includes an indicator for DACA eligibility, an indicator for if the year is after DACA was available, and the interaction of the two. For most of the estimates, the magnitudes are approximately 50 percent larger than the baseline results from Table 2. However, for schooling, the magnitude is four times larger. Row 2 adds demographic controls including education level, sex, race, ethnicity, marital status, state level unemployment rates, and fixed effects for individuals' age and age entered the United States. Once these controls are included, the estimates are extremely similar to the baseline estimates. Row 3 includes year and state fixed effects, and little change occurs in the estimates. Row 4 includes state time trends and are the same as the baseline estimates found in Panel A of Table 2.

Panel B shows the estimates for different sample choices. Row 1 restricts the sample to those individuals who are only two years above or below the age cutoff for entering the United States, instead of the four years used in the baseline estimation. The magnitude of these results are approximately 20 percent larger than the baseline results. The sample for row 2 includes those who are six years above or below the cutoff, and finds similar to slightly smaller results than the baseline results. Row 3 includes all education levels instead of only a high school degree or more. With

this sample, many of the individuals (35 percent) will have less than a high school degree, causing them to be ineligible for DACA and therefore biasing the estimates toward zero. Rows 4 and 5 are for the subsample of individuals who are married and single. DACA appears to have a larger effect on single than married individuals; however, most of these differences are not statistically significant.

## 7 Policy Implications

The results help inform two main policy questions. First, how did the implementation of DACA affect its target population and what might happen if DACA were rescinded? Second, what do the results imply for potential future immigration policies such as a temporary or permanent amnesty program or Deferred Action for Parents of Americans and Lawful Permanent Residents (DAPA). Answering these two questions looks at the efficacy of current immigration policy and informs the debate on future immigration policy.

The results speak directly to how the implementation of DACA affected its target population – young unauthorized immigrants. The DID results are a lower bound of the intent-to-treat estimates so can be interpreted as a lower bound on the average effect of DACA on the DACA-eligible population. The results indicate the implementation of DACA has increased the target population’s likelihood of working by approximately 4 percentage points. This increase comes from an increase in labor force participation and a decrease in the unemployment rate of the target population. DACA has increased the income of those in the bottom of the income distribution. These effects imply that in its first two years, DACA moved 50,000–75,000 unauthorized immigrants into employment. Also, note that over two-thirds of DACA-eligible individuals had applied for DACA as of 2014, which implies these applicants anticipated the benefits of DACA approval to be greater than the time costs of applying and the 465 dollar fee. Because DACA was done through prosecutorial discretion, it is more susceptible to being rescinded than a law. The results of this paper predict the elimination of DACA would have similar effect sizes, but in the opposite direction.

Note that the estimates from the DID analysis are partial equilibrium effects. Therefore, DACA creates potential general equilibrium effects arising from the increase in the supply of workers. The results suggest DACA moved approximately 50,000–75,000 unauthorized immigrants into employment in 2013 and 2014. This increase in the supply of workers only accounts for 0.94–1.41 percent of the 5.33 million individuals who gained employment in 2013 and 2014 (Bureau of Labor Statistics). This finding suggests the general equilibrium effects of DACA on wages is likely to be small. However, the general equilibrium effects may be more problematic for a future immigration policy that targets a larger population. Also, as discussed in the conceptual framework section, due to breaking large labor market frictions for unauthorized immigrants and the minimal general equilibrium effect on wages, the overall welfare effect of DACA is likely not just a pure transfer to DACA-eligible individuals, but would likely enhance efficiency, although it would not be Pareto efficient.

The results also help inform future immigration policy. Approximately 11.4 million unauthorized immigrants live in the United States (Baker and Rytina 2013). However, only 5.4 percent of unauthorized immigrants have obtained deferred action and work authorization through DACA. From the results above, DACA improved the labor market outcomes for this small portion of unauthorized immigrants. However, the majority of unauthorized immigrants are excluded from DACA and do not receive these benefits. A temporary or permanent amnesty program could expand deferred action and work authorization to a larger population of unauthorized immigrants. However, because such an expansion to a larger population would include a different type of unauthorized population, whether the benefits would be similar to those found for DACA is unclear. The results from Panel A and B of Table 2 come from samples that are close to the DACA cutoff criteria. Therefore, these estimates would be particularly policy relevant if DACA were expanded by increasing the age requirements. For individuals near these age cutoffs, the benefits are likely to be very similar.

However, if future temporary or permanent amnesty programs are expanded to include older unauthorized immigrants who likely entered the United States at older ages and may have restricted

English proficiency, the effects of deferred action and work authorization may be quite different from those found for DACA. In addition, the effects could vary depending on whether the amnesty program was temporary or permanent. The intent-to-treat effects for a temporary program are likely smaller than for a permanent program, due to lower application rates from unauthorized immigrants wary of future deportation. Smaller effects for a temporary program may also come from less human capital investment without the assurance of the ability to work in the future.

The biggest potential difference between DACA and a temporary or permanent amnesty program for a larger unauthorized immigrant population are the potential general equilibrium effects. Because DACA has moved only a small number of individuals into employment, the downward pressure on wages from the increased supply of workers is likely very small. However, a larger temporary or permanent amnesty program could move many more workers into employment and could cause larger decreases in wages, particularly for low-skilled jobs. These potential general equilibrium effects make the welfare consequences unclear. Unauthorized immigrants will clearly be better off, but if the downward pressure on wages is large enough, they could offset these benefits.

Of particular importance is what these results imply for DAPA. DAPA was announced by President Obama on November 20th, 2014, and would expand eligibility for deferred action and work authorization to an additional 3.7 million unauthorized immigrants.<sup>10</sup> This new policy would expand DACA by eliminating the under-31 age requirement and would require individuals to only have been in the United States since 2010 instead of 2007. Because this paper estimates the effect of DACA on individuals near the cutoffs of these requirements, the effects of DAPA on these unauthorized immigrants should be very similar to the effects of DACA. However, DAPA would also make all parents of a US citizen who have been in the United States for at least five years eligible for deferred action and work authorization. The effects of DAPA on this population are much less clear. This population of parents would be older, already have children, and may already be well established in a job. Therefore, the labor market effects of DAPA on this population may be

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<sup>10</sup><http://migrationpolicy.org/news/mpi-many-37-million-unauthorized-immigrants-could-get-relief-deportation-under-anticipated-new>

smaller than the effects of DACA. If the effects of DAPA were the same as DACA, DAPA would move approximately 250,000 unauthorized immigrants into employment.

## **8 Conclusion**

Because the United States has the most unauthorized immigrants of any country in the world, immigration policies affect millions of people. Deferred Action for Childhood Arrivals (DACA), one of the largest immigration policies in the last 25 years, has reduced the labor market frictions for young unauthorized immigrants by giving them deportation relief and work authorization. This paper looks at how DACA has affected unauthorized immigrants eligible for DACA. I find that those eligible for DACA are more likely to work. This increase in the likelihood of working comes from both a movement into the labor force and a decrease in unemployment. Those in the bottom of the income distribution have seen increases in their income. I also find some evidence of DACA increasing unauthorized immigrants GED attainment, although this evidence is at most suggestive.

The results of this paper shed light on how the lack of legal status in the United States depresses individuals' labor market outcomes. The results speak directly to how deportation relief and work authorization affect young unauthorized immigrants. Studying the effects of DACA gives insights into how future immigration policies, such as an amnesty program or DAPA, would affect their target populations. As immigration policies are studied and refined, they will be able to better benefit the large population of unauthorized immigrants in the United States.

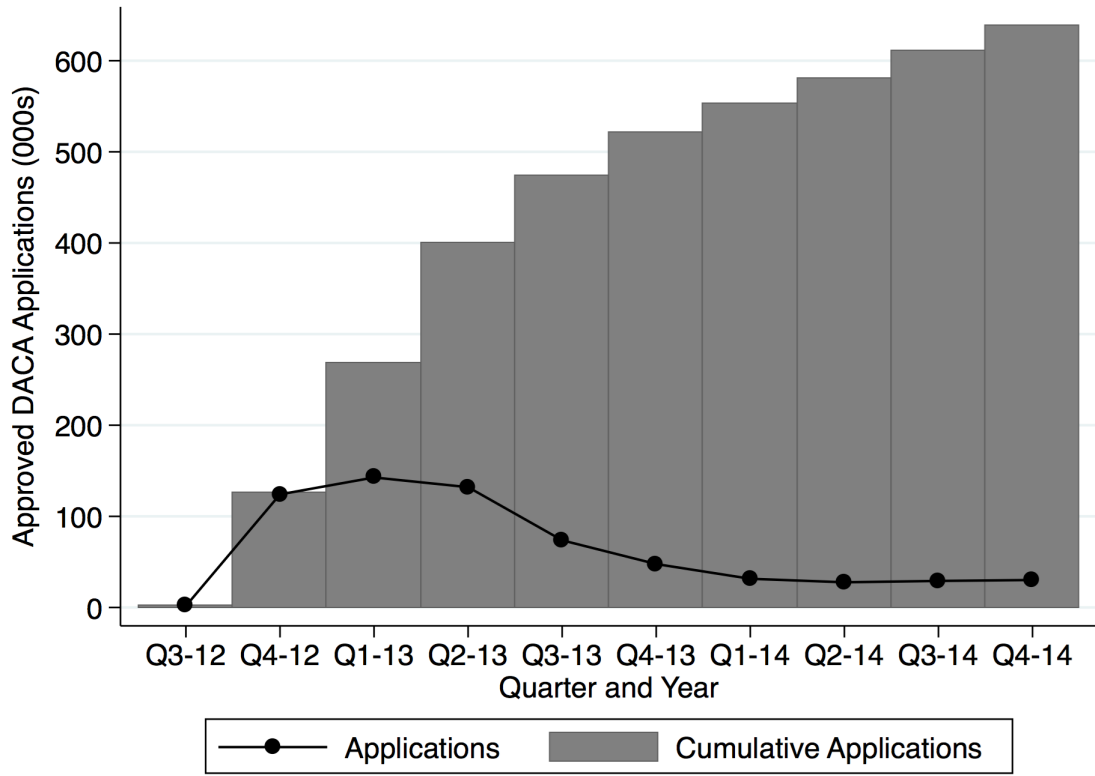


## References

- Acosta, Yesenia D., Luke J. Larsen, and Elizabeth M. Grieco. 2014. "Noncitizens Under Age 35: 2010-2012." American Community Survey Briefs. Report Number: ACSBR/12-06.
- Amuedo-Dorantes, Catalina, and Cynthia Bansak. 2011. "The Impact of Amnesty on Labor Market Outcomes: A Panel Study Using the Legalized Population Survey." *Industrial Relations: A Journal of Economy and Society* 50(3): 443-71.
- Amuedo-Dorantes, Catalina, and Francisca Antman. 2016. "The Impact of Authorization on the Schooling and Labor Market Outcomes of Undocumented Immigrants: Evidence from the Deferred Action for Childhood Arrivals Program." Working Paper.
- Amuedo-Dorantes, Catalina, Cynthia Bansak, and Steven Raphael. 2007. "Gender Differences in the Labor Market: Impact of IRCA's Amnesty Provisions." *American Economic Review Papers and Proceedings* 97(2): 412-16.
- Baker, Bryan C., and Nancy Rytina. 2013. "Estimates of the Unauthorized Immigrant Population Residing in the United States: January 2012." Population Estimates, Office of Immigration Statistics, Department of Homeland Security.
- Baker, Scott. 2014. "Effects of the 1986 Immigration Reform and Control Act on Crime." Stanford Law and Economics Olin Working Paper No. 412.
- Bratsberg, Bernt, James F. Ragan Jr, and Zafar M. Nasir. 2002. "The Effect of Naturalization on Wage Growth: A Panel Study of Young Male Immigrants." *Journal of Labor Economics* 20(3): 568-97.
- Cortes, Kalena E. 2013. "Achieving the DREAM: The Effect of IRCA on Immigrant Youth Postsecondary Educational Access." *American Economic Review Papers and Proceedings* 103(3): 428-32.
- Fortuny, Karina, Randy Capps, and Jeffery S. Passel. 2007. "The Characteristics of Unauthorized Immigrants in California, Los Angeles County, and the United States." Washington, DC: The Urban Institute.
- Gonzales, Roberto G., Veronica Terriquez, and Stephen P. Ruszczyk. 2014. "Becoming DACAmented Assessing the Short-Term Benefits of Deferred Action for Childhood Arrivals (DACA)." *American Behavioral Scientist* 58(14): 1852-72.
- Kaushal, Neeraj. 2006. "Amnesty Programs and the Labor Market Outcomes of Undocumented Workers." *Journal of Human Resources* 41(3): 631-47.
- Kosnac, Hillary S., Wayne A. Cornelius, Tom K. Wong, Micah Gell-Redman, and D. Alex Hughes. 2014. "Determinants of DACA Applications: A Multi-level, Bi-national Study of Incentives, Deterrents, and Consequences of Decisions to Seek Deferred Action for Childhood Arrivals." National Center for Border Security and Immigration.
- Kossoudji, Sherrie A., and Deborah A. Cobb-Clark. 2002. "Coming out of the Shadows: Learning about Legal Status and Wages from the Legalized Population." *Journal of Labor Economics* 20(3): 598-628.
- Orrenius, Pia M., and Madeline Zavodny. 2003. "Do Amnesty Programs Reduce Undocumented Immigration? Evidence from IRCA." *Demography* 40(3): 437-50.
- Orrenius, Pia M., and Madeline Zavodny. 2012. "The Economic Consequences of Amnesty for Unauthorized Immigrants." *Cato Journal* 32: 85-106.

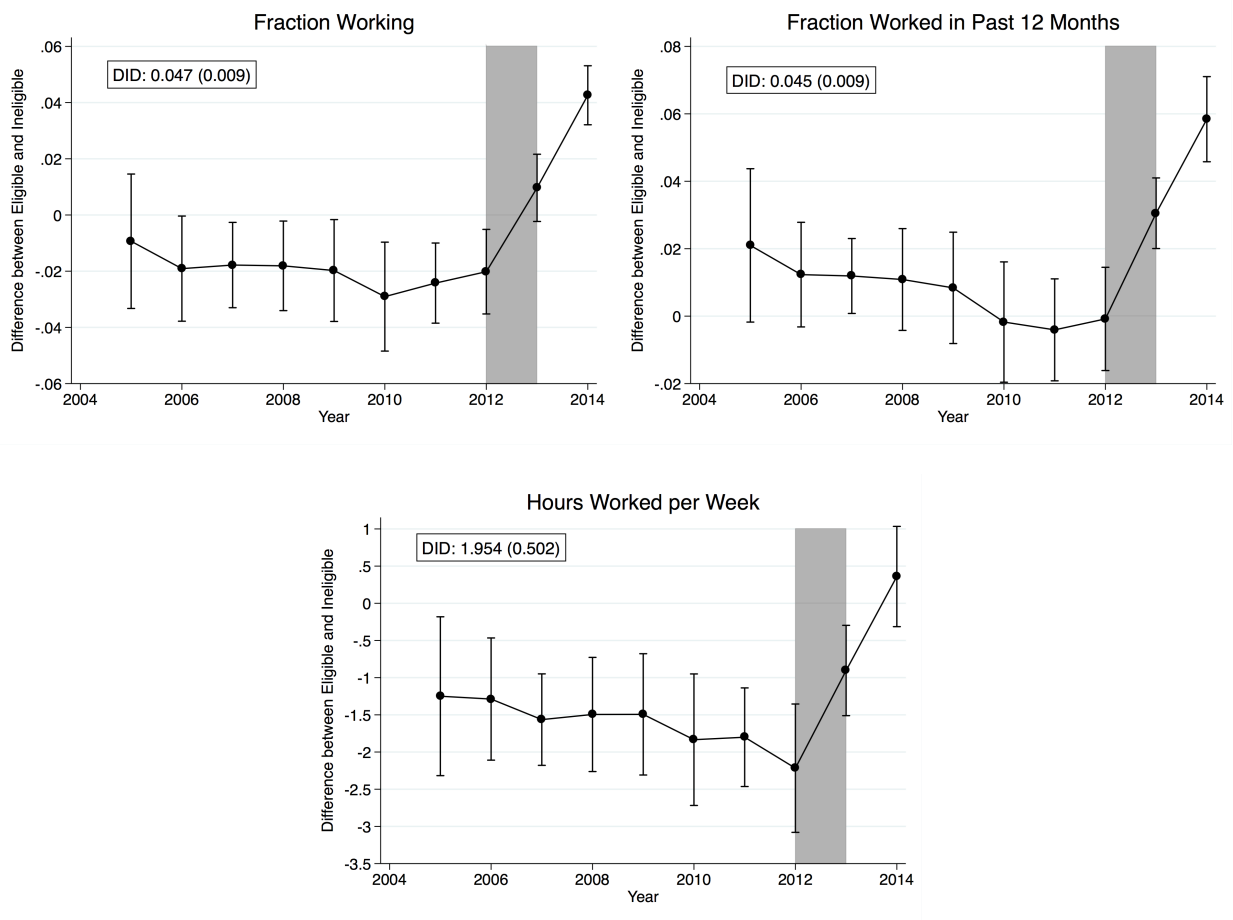
- Passel, Jeffrey, and D’Vera Cohn. 2009. “A Portrait of Unauthorized Immigrants in the United States.” Washington, DC: Pew Hispanic Center.
- Passel, Jeffrey, and Mark Hugo Lopez. 2012. "Up to 1.7 Million Unauthorized Immigrant Youth may Benefit from New Deportation Rules." Washington, DC: Pew Hispanic Center.
- Rivera-Batiz, Francisco L. 1999. "Undocumented Workers in the Labor Market: An Analysis of the Earnings of Legal and Illegal Mexican Immigrants in the United States." *Journal of Population Economics* 12(1): 91-116.
- Smith, James P. 2006. "Immigrants and the Labor Market." *Journal of Labor Economics* 24(2): 203-33.

Figure 1: Number of Approved DACA Applications by Quarter



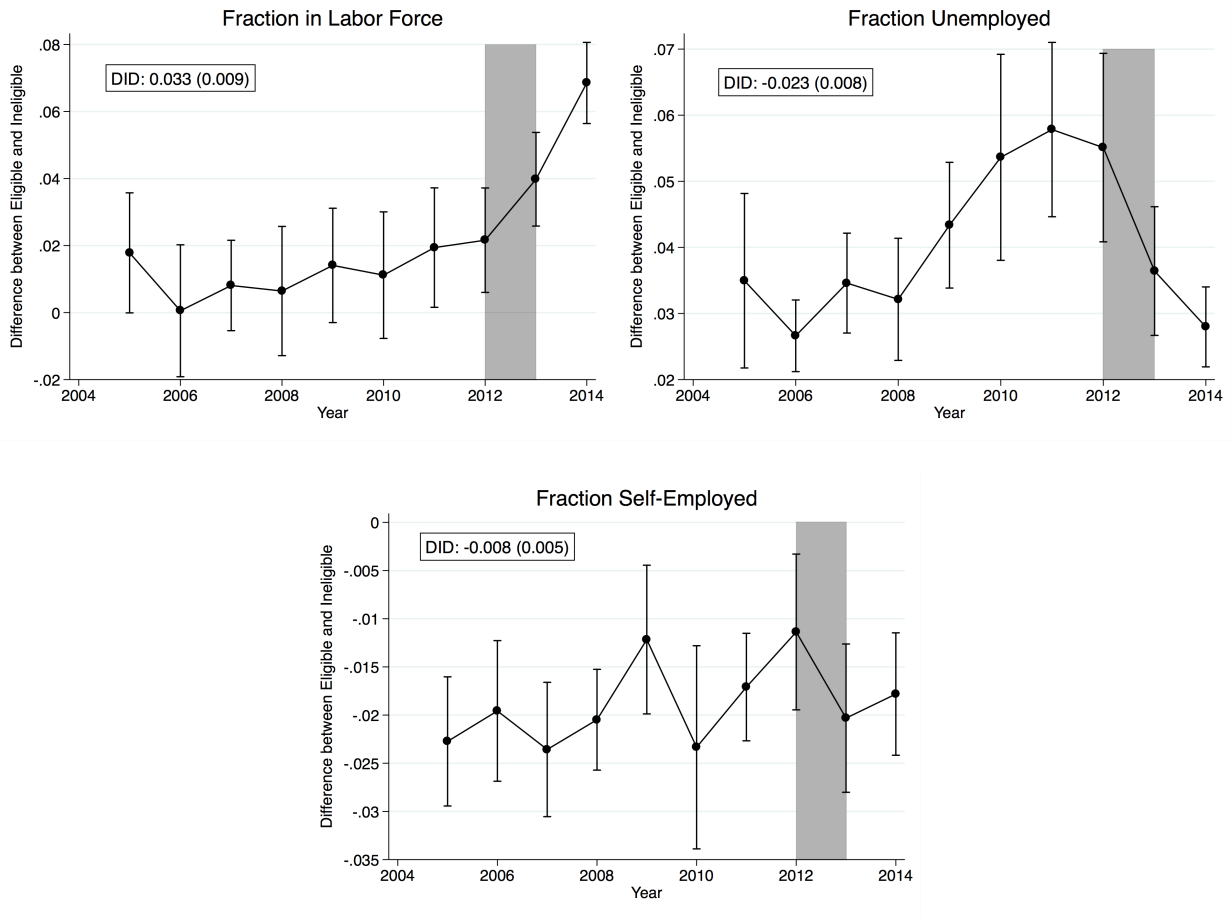
Note: The black line represents the number of DACA applications approved in a given quarter. The bars represent the cumulative number of DACA applications approved by a given quarter. The y-axis shows the number of approved applications in thousands. The x-axis shows the quarter and year.

Figure 2: Difference in Working by DACA Eligibility



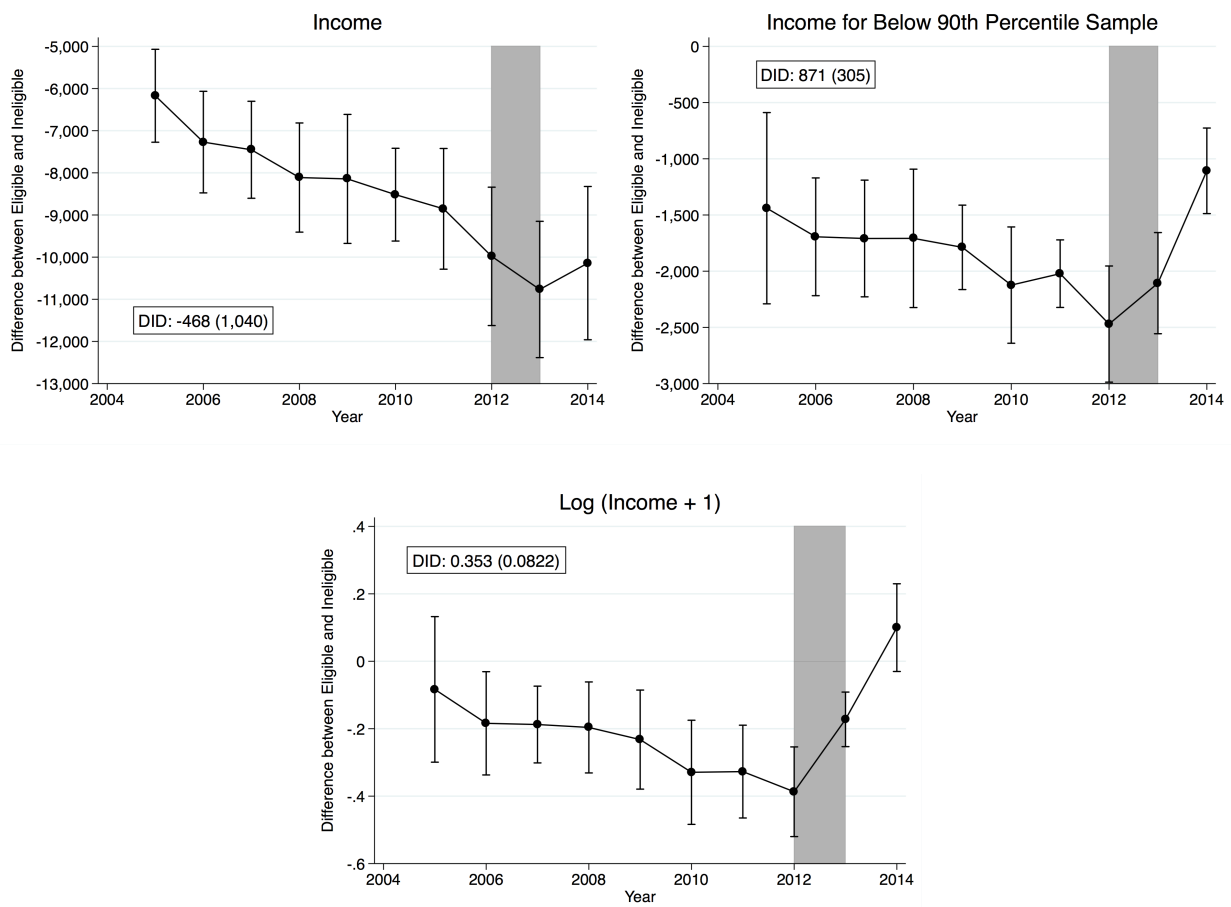
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel C of Table 2 and includes all non-citizens with at least a high school degree and who are between the ages of 18 and 35. DID estimates without controls that account for pre-trends are shown in the box. The shaded area between 2012 and 2013 represents when DACA became available.

Figure 3: Difference in Employment Status by DACA Eligibility



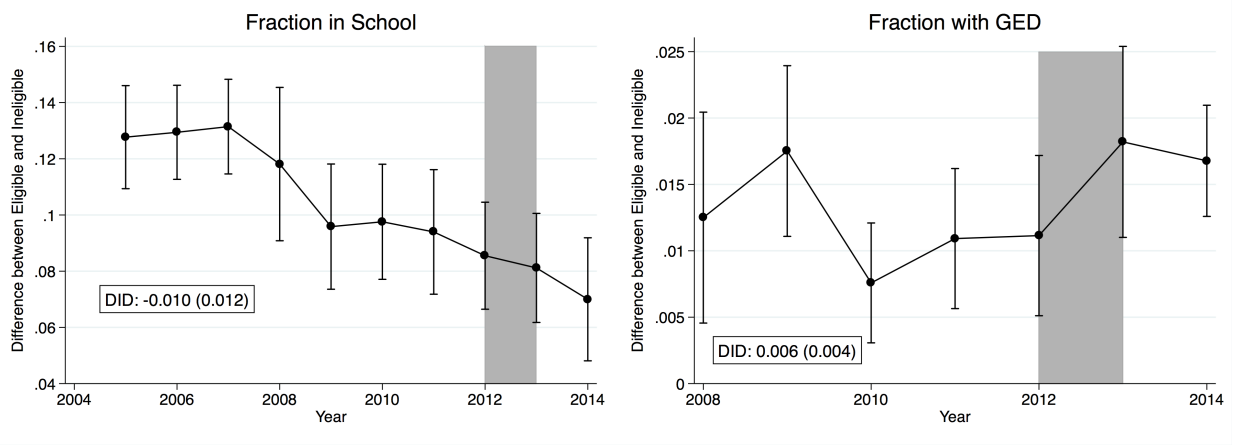
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel C of Table 2 and includes all non-citizens with at least a high school degree and who are between the ages of 18 and 35. DID estimates without controls that account for pre-trends are shown in the box. The shaded area between 2012 and 2013 represents when DACA became available.

Figure 4: Difference in Income by DACA Eligibility



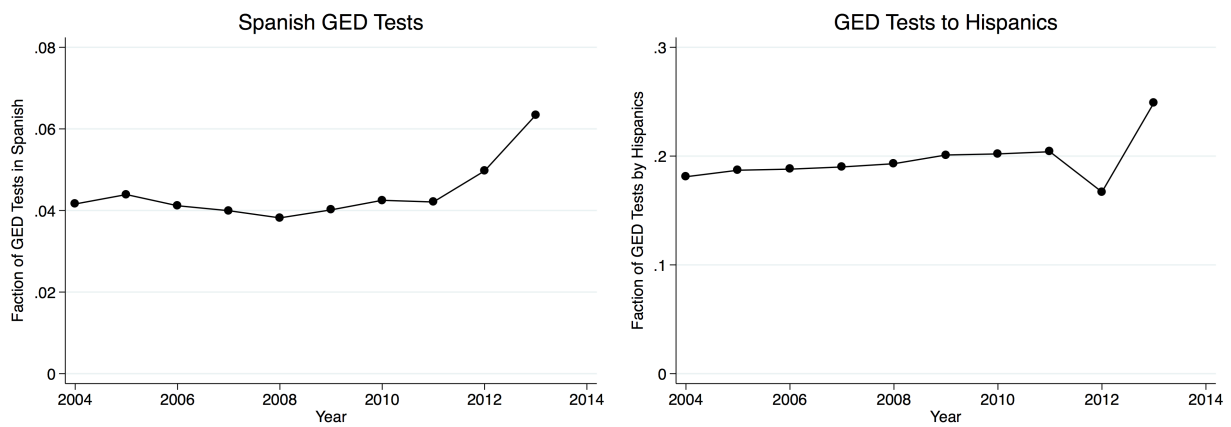
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel C of Table 2 and includes all non-citizens with at least a high school degree and who are between the ages of 18 and 35. The first figure includes all individuals in the sample. The second figure restricts the sample to individuals with income below the 90th percentile. The third figure uses the log of income plus one as the outcome variable instead of linear income. DID estimates without controls that account for pre-trends are shown in the box. The shaded area between 2012 and 2013 represents when DACA became available.

Figure 5: Difference in Education Outcomes by DACA Eligibility



Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel C of Table 2 and includes all non-citizens with at least a high school degree and who are between the ages of 18 and 35. DID estimates without controls that account for pre-trends are shown in the box. The shaded area between 2012 and 2013 represents when DACA became available.

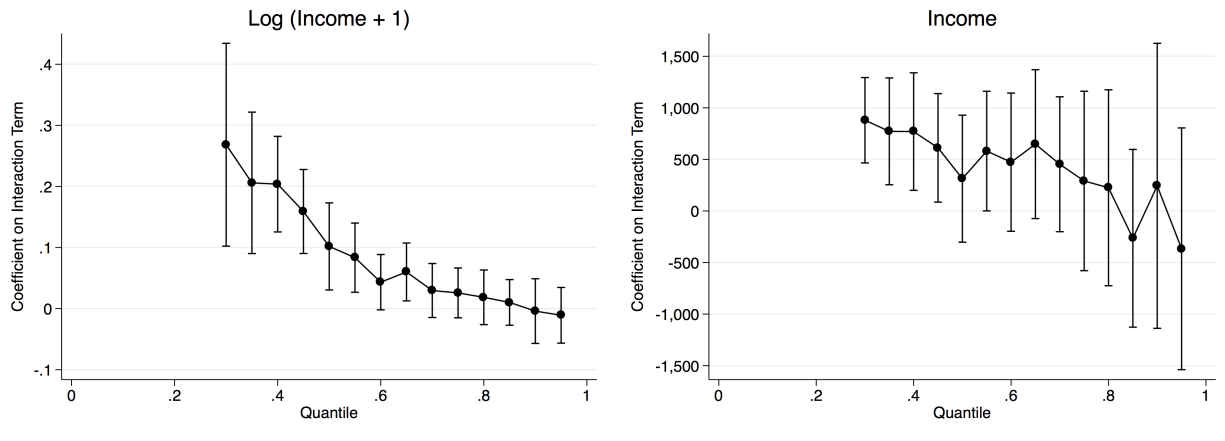
Figure 6: Fraction of GED Tests Administered in Spanish and to Hispanics



Note: The first graph shows the fraction of GED tests administered in Spanish for each year. The second graph shows the fraction of GED tests administered to Hispanics for each year.



Figure 7: Effect of DACA on Income by Income Quantile



Note: Each point represents the coefficient on the interaction term between DACA eligibility and the binary variable for after DACA became available when a quantile regression is estimated using the specification from equation (1). No estimates are available prior to the 0.30 quantile because 25 to 30 percent of individuals in the sample have an income of zero. The sample is the same as Panel A of Table 2. The outcome variable for the first graph is  $\log(\text{Income} + 1)$ . The outcome variable for the second graph is income.

Table 1: Summary Statistics

Variable	Mean		Difference	T-statistic
	DACA Eligible	DACA Ineligible		
Working	65.3	66.5	-1.2	-3.3
In Labor Force	73.9	71.9	2.0	6.5
Unemployed	11.7	7.5	4.1	16.2
Income	15,787	24,358	-8,571	-31.8
Hours Worked per Week	27.1	28.6	-1.5	-9.1
Worked in Past Year	75.1	73.9	1.2	3.5
Self-Employed	4.7	6.6	-1.9	-14.0
Attending School	32.0	21.6	10.4	28.1
GED	3.9	2.5	1.4	11.1
Years in US	15.5	6.4	9.1	144.4
Age Entered US	8.4	22.3	-13.8	-287.3
Male	52.6	51.9	0.7	3.1
White	75.1	59.0	16.1	16.3
Black	9.3	9.0	0.2	0.4
Asian	14.5	30.7	-16.2	-27.5
Hispanic Ethnicity	65.4	42.1	23.2	20.8
Home Language of Spanish	63.6	41.3	22.3	20.3
Born in Latin America	72.4	47.4	24.9	30.9
Age	23.9	28.6	-4.7	-148.7
Married	24.0	51.4	-27.4	-88.6
Live in a Metro Area	92.4	92.9	-0.4	-1.9
High School Degree	49.8	37.2	12.6	30.3
Some College	40.2	25.4	14.7	43.2
College Degree	10.0	37.3	-27.3	-65.4
Observations	99,844	338,866		

Note: The sample for the summary statistics includes non-citizens who are ages 18–35 and have at least a high school degree and corresponds to the sample in Panel C of Table 2. All binary variables are represented in percent terms.

Table 2: The Effect of DACA on Labor Market and Education Outcomes

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Entered US between Ages 12 and 19</b>									
Eligible* After	0.048*** [0.010]	0.037*** [0.011]	-0.019*** [0.007]	-1 [466]	1.715*** [0.420]	0.039*** [0.011]	-0.005 [0.005]	-0.021** [0.009]	0.001 [0.004]
Eligible	-0.027** [0.011]	-0.042*** [0.012]	-0.014 [0.011]	-447 [279]	-0.378 [0.374]	-0.033*** [0.011]	0.001 [0.006]	-0.046*** [0.010]	0.007* [0.004]
Observations	102,765	102,765	68,831	102,765	102,765	102,765	79,454	102,765	72,117
R-squared	0.145	0.150	0.032	0.199	0.224	0.137	0.017	0.413	0.042
<b>Panel B: Ages 27 to 34 in June 2012 and Entered US before Age 16</b>									
Eligible* After	0.044*** [0.013]	0.028** [0.012]	-0.022*** [0.008]	1,397 [904]	1.184** [0.486]	0.027** [0.011]	0.017* [0.010]	0.002 [0.010]	0.009 [0.010]
Eligible	0.008 [0.018]	0.007 [0.016]	-0.003 [0.011]	214 [1,047]	0.366 [0.620]	0.014 [0.015]	-0.007 [0.012]	-0.015 [0.010]	0.010 [0.011]
Observations	33,236	33,236	26,796	33,236	33,236	33,236	29,819	33,236	23,939
R-squared	0.059	0.067	0.027	0.143	0.110	0.073	0.018	0.079	0.078
<b>Panel C: All Non-citizens Ages 18 to 35 with at Least a High School Degree</b>									
Eligible* After	0.037*** [0.006]	0.033*** [0.005]	-0.010** [0.004]	-1,045 [672]	0.931*** [0.317]	0.030*** [0.006]	-0.002 [0.003]	-0.005 [0.006]	0.003 [0.002]
Eligible	0.069*** [0.006]	0.065*** [0.005]	-0.013*** [0.004]	5,801*** [437]	2.414*** [0.228]	0.060*** [0.005]	0.006* [0.004]	-0.028*** [0.005]	-0.004 [0.003]
Observations	438,710	438,710	308,368	438,710	438,710	438,710	355,205	438,710	306,442
R-squared	0.130	0.131	0.032	0.220	0.187	0.127	0.022	0.297	0.052
<b>Panel D: All Citizens and Non-citizens Ages 18 to 35 with at Least a High School Degree</b>									
Eligible* After	0.021*** [0.005]	0.017*** [0.004]	-0.009*** [0.004]	-529 [490]	0.600** [0.256]	0.025*** [0.006]	0.002 [0.003]	0.017*** [0.005]	0.007*** [0.002]
Eligible	-0.006** [0.003]	-0.012*** [0.003]	-0.006*** [0.002]	163 [159]	-0.344*** [0.110]	-0.030*** [0.003]	0.013*** [0.002]	-0.023*** [0.002]	-0.022*** [0.001]
Observations	5,636,126	5,636,126	4,411,763	5,636,126	5,636,126	5,636,126	5,111,496	5,636,126	4,048,401
R-squared	0.084	0.069	0.045	0.248	0.161	0.059	0.015	0.322	0.116

Note: Table 2 reports the estimates from equation (1) for four separate samples. All four samples are restricted to individuals with at least a high school degree. Panel A uses the sample of non-citizens who entered the United States between the ages of 12 and 19. Panel B uses the sample of non-citizens between the ages of 27 and 34 who arrived in the United States before the age of 16. Panel C uses the sample of non-citizens between the ages of 18 and 35. Panel D uses the sample of citizens and non-citizens between the ages of 18 and 35. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term. The second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 3: Pre-trends

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.056*** [0.018]	0.041** [0.017]	-0.021* [0.011]	281 [902]	2.378*** [0.715]	0.041** [0.019]	0.005 [0.009]	0.005 [0.013]	0.006 [0.007]
Eligible*2013	0.033** [0.016]	0.002 [0.018]	-0.040*** [0.012]	-318 [838]	0.964 [0.757]	0.020 [0.017]	-0.008 [0.009]	0.012 [0.015]	0.003 [0.006]
Eligible*2011	-0.011 [0.015]	-0.008 [0.015]	0.008 [0.012]	-439 [757]	-0.655 [0.626]	-0.022 [0.014]	0.000 [0.008]	0.026** [0.012]	0.001 [0.006]
Eligible*2010	0.002 [0.015]	-0.011 [0.017]	-0.014 [0.015]	-49 [711]	0.333 [0.650]	0.003 [0.014]	0.004 [0.008]	0.029 [0.018]	0.001 [0.006]
Eligible*2009	0.011 [0.017]	0.005 [0.016]	-0.006 [0.012]	478 [833]	0.949 [0.675]	0.006 [0.017]	0.012 [0.009]	0.024* [0.013]	0.010 [0.006]
Eligible*2008	0.014 [0.013]	-0.014 [0.013]	-0.030*** [0.011]	392 [793]	0.588 [0.633]	0.002 [0.014]	0.000 [0.008]	0.020 [0.014]	0.006 [0.007]
Eligible*2007	-0.002 [0.014]	-0.015 [0.014]	-0.010 [0.012]	-101 [730]	-0.713 [0.601]	-0.015 [0.014]	-0.005 [0.009]	0.040*** [0.014]	- -
Eligible*2006	-0.027 [0.016]	-0.054*** [0.016]	-0.022** [0.010]	-981 [805]	-0.744 [0.671]	-0.032* [0.016]	0.005 [0.008]	0.051*** [0.012]	- -
Eligible*2005	-0.015 [0.018]	-0.035** [0.016]	-0.016 [0.013]	675 [730]	-0.077 [0.688]	-0.006 [0.018]	0.011 [0.009]	0.043** [0.019]	- -
Observations	102,765	102,765	68,831	102,765	102,765	102,765	79,454	102,765	72,117
R-squared	0.145	0.151	0.033	0.200	0.224	0.138	0.017	0.414	0.042

Note: Table 3 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2012 interaction is the omitted interaction. The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 4: The Effect of DACA on Survey-Item Response Rates

Variables	Citizen	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*After	-0.002 [0.005]	-0.002 [0.006]	0.004 [0.006]	-0.007 [0.006]	0.005 [0.009]	0.007 [0.006]	-0.002 [0.005]	0.004 [0.005]	0.001 [0.005]	0.002 [0.008]
Eligible	0.014** [0.005]	0.010* [0.005]	0.007 [0.007]	0.023*** [0.006]	0.006 [0.007]	0.005 [0.006]	0.010* [0.006]	0.009 [0.006]	0.002 [0.004]	0.002 [0.009]
Observations	102,765	102,765	102,765	68,831	102,765	102,765	102,765	102,765	102,765	72,117
R-squared	0.014	0.018	0.012	0.017	0.613	0.013	0.016	0.010	0.013	0.039

Note: Table 4 reports the estimates from equation (1) with the outcome variable,  $Y_{it}$ , being an indicator variable equal to one if the survey question for the outcome variable of interest was not answered and the outcome variable of interest was imputed by the ACS. The indicator variable is equal to zero otherwise. The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 5: The Effect of DACA by Income Level

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Below Median Income</b>									
Eligible*After	0.063*** [0.015]	0.050*** [0.017]	-0.049** [0.020]	339*** [111]	1.891*** [0.471]	0.049*** [0.017]	-0.022** [0.009]	-0.036*** [0.013]	0.000 [0.005]
Eligible	-0.024* [0.013]	-0.031** [0.014]	0.001 [0.019]	-275*** [76]	-0.190 [0.403]	-0.036*** [0.014]	0.006 [0.009]	-0.067*** [0.012]	0.010** [0.004]
Observations	54,417	54,417	23,315	54,417	54,417	54,417	31,892	54,417	39,413
R-squared	0.044	0.061	0.035	0.077	0.079	0.058	0.035	0.468	0.047
<b>Panel B: Above Median Income</b>									
Eligible*After	0.024*** [0.009]	0.017** [0.007]	-0.008 [0.005]	-1,086 [850]	1.065** [0.471]	0.020*** [0.007]	0.004 [0.007]	-0.005 [0.010]	0.002 [0.005]
Eligible	-0.055*** [0.016]	-0.076*** [0.013]	-0.018* [0.011]	-784 [654]	-2.006*** [0.581]	-0.054*** [0.012]	-0.005 [0.009]	0.006 [0.016]	0.002 [0.014]
Observations	48,348	48,348	45,516	48,348	48,348	48,348	47,562	48,348	32,704
R-squared	0.041	0.060	0.010	0.160	0.093	0.074	0.018	0.233	0.043
<b>Panel C: Below 90th Percentile Income</b>									
Eligible*After	0.050*** [0.011]	0.038*** [0.011]	-0.021*** [0.007]	343 [260]	1.777*** [0.426]	0.041*** [0.012]	-0.006 [0.005]	-0.025*** [0.010]	-0.001 [0.004]
Eligible	-0.024** [0.011]	-0.039*** [0.012]	-0.015 [0.011]	84 [185]	-0.266 [0.371]	-0.031*** [0.011]	0.001 [0.006]	-0.050*** [0.010]	0.008** [0.004]
Observations	96,111	96,111	62,453	96,111	96,111	96,111	72,898	96,111	67,419
R-squared	0.137	0.145	0.031	0.235	0.214	0.131	0.016	0.428	0.041

Note: Table 5 reports the estimates from equation (1) for individuals below the median income level (Panel A), above the median income level (Panel B), and below the 90th percentile in income (Panel C). The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 6: The Effect of DACA by Ethnicity

Variables	Working	Labor Force	Unemployed	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Hispanic</b>								
Eligible*After	0.044*** [0.012]	0.032*** [0.010]	-0.020** [0.009]	1.939*** [0.455]	0.039*** [0.010]	-0.008 [0.007]	-0.023** [0.009]	-0.002 [0.005]
Eligible	-0.010 [0.017]	-0.015 [0.016]	-0.005 [0.015]	-0.113 [0.550]	-0.020 [0.015]	0.002 [0.008]	-0.062*** [0.015]	0.006 [0.007]
Observations	52,285	52,285	39,065	52,285	52,285	43,294	52,285	35,296
R-squared	0.145	0.149	0.030	0.209	0.158	0.014	0.271	0.033
<b>Panel B: Mexican</b>								
Eligible*After	0.046*** [0.014]	0.040*** [0.012]	-0.012 [0.009]	1.785*** [0.588]	0.041*** [0.012]	-0.016* [0.009]	-0.022* [0.013]	-0.001 [0.007]
Eligible	0.011 [0.021]	0.010 [0.019]	-0.005 [0.018]	0.676 [0.745]	-0.002 [0.019]	0.001 [0.010]	-0.065*** [0.018]	0.007 [0.010]
Observations	34,072	34,072	25,374	34,072	34,072	28,174	34,072	22,375
R-squared	0.187	0.198	0.033	0.250	0.208	0.015	0.215	0.033

Note: Table 6 reports the estimates from equation (1) for Hispanics (Panel A) and Mexicans (Panel B). The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 7: The Effect of DACA by Gender

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Women</b>									
Eligible*After	0.041*** [0.013]	0.037*** [0.013]	-0.013 [0.012]	198 [504]	1.487*** [0.429]	0.038*** [0.012]	-0.003 [0.007]	-0.012 [0.015]	0.000 [0.005]
Eligible	-0.011 [0.016]	-0.034** [0.017]	-0.028 [0.017]	-47 [345]	0.715 [0.470]	-0.014 [0.016]	-0.001 [0.010]	-0.041*** [0.015]	0.008 [0.005]
Observations	48,153	48,153	28,107	48,153	48,153	48,153	34,302	48,153	33,831
R-squared	0.087	0.090	0.031	0.182	0.119	0.085	0.020	0.405	0.045
<b>Panel B: Men</b>									
Eligible*After	0.049*** [0.014]	0.034** [0.014]	-0.022*** [0.008]	-299 [737]	1.716*** [0.634]	0.035*** [0.015]	-0.006 [0.006]	-0.028*** [0.010]	0.001 [0.005]
Eligible	-0.040*** [0.013]	-0.049*** [0.014]	-0.004 [0.014]	-756* [416]	-1.260*** [0.486]	-0.049*** [0.013]	0.003 [0.007]	-0.052*** [0.013]	0.008 [0.007]
Observations	54,612	54,612	40,724	54,612	54,612	54,612	45,152	54,612	38,286
R-squared	0.207	0.222	0.040	0.194	0.283	0.205	0.019	0.421	0.044

Note: Table 7 reports the estimates from equation (1) for women (Panel A) and men (Panel B). The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.



Table 8: The Effect of DACA by Education Level

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Less Educated (High School Degree or Some College)</b>									
Eligible* After	0.050*** [0.011]	0.039*** [0.011]	-0.020*** [0.007]	341 [386]	2.039*** [0.435]	0.045*** [0.012]	-0.005 [0.005]	-	-
Eligible	-0.024** [0.012]	-0.041*** [0.012]	-0.016 [0.011]	-130 [260]	-0.270 [0.378]	-0.031*** [0.011]	0.001 [0.006]	-	-
Observations	89,308	89,308	58,314	89,308	89,308	89,308	67,549	-	-
R-squared	0.151	0.159	0.033	0.178	0.236	0.144	0.017	-	-
<b>Panel B: Highly Educated (College Degree or More)</b>									
Eligible* After	0.032 [0.023]	0.025 [0.021]	-0.010 [0.015]	-3,024* [1,818]	-0.643 [0.972]	-0.003 [0.019]	-0.003 [0.013]	-	-
Eligible	0.013 [0.082]	0.055 [0.076]	0.063 [0.063]	1,052 [2,917]	1.702 [2.604]	0.016 [0.077]	-0.018 [0.040]	-	-
Observations	13,457	13,457	10,517	13,457	13,457	13,457	11,905	-	-
R-squared	0.084	0.079	0.036	0.148	0.117	0.072	0.028	-	-

Note: Table 8 reports the estimates from equation (1) for individuals with a high school degree or some college (Panel A) and for college graduates (Panel B). The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table 9: Robustness Checks

Variables	Working	Labor Force	Unemployed	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Different Sets of Control Variables</b>								
No Controls	0.083*** [0.012]	0.072*** [0.013]	-0.025*** [0.007]	781 [515]	3.411*** [0.535]	0.068*** [0.013]	-0.092*** [0.015]	0.005 [0.004]
Demographic Controls	0.050*** [0.010]	0.039*** [0.011]	-0.020*** [0.007]	-43 [472]	1.774*** [0.420]	0.040*** [0.011]	-0.021*** [0.010]	0.001 [0.004]
Year and State FE	0.049*** [0.010]	0.038*** [0.010]	-0.020*** [0.007]	-28 [469]	1.739*** [0.416]	0.040*** [0.011]	-0.021*** [0.009]	0.001 [0.004]
State Time Trends (Baseline)	0.048*** [0.010]	0.037*** [0.011]	-0.019*** [0.007]	-1 [466]	1.715*** [0.420]	0.039*** [0.011]	-0.021*** [0.009]	0.001 [0.004]
<b>Panel B: Different Samples</b>								
Enter US Age: 14 to 17	0.059*** [0.015]	0.041*** [0.015]	-0.031*** [0.010]	843 [629]	2.287*** [0.596]	0.050*** [0.015]	-0.014 [0.011]	0.002 [0.005]
Enter US Age: 10 to 21	0.041*** [0.009]	0.036*** [0.009]	-0.011** [0.005]	-111 [439]	1.403*** [0.350]	0.035*** [0.008]	-0.019*** [0.008]	0.004 [0.003]
All Education Levels	0.039*** [0.009]	0.036*** [0.008]	-0.008 [0.006]	125 [367]	1.415*** [0.350]	0.034*** [0.009]	-0.016* [0.009]	0.003 [0.003]
Married	0.034* [0.020]	0.006 [0.019]	-0.036*** [0.012]	862 [1,014]	1.188 [0.765]	0.020 [0.019]	-0.008 [0.014]	0.000 [0.008]
Single	0.049*** [0.011]	0.044*** [0.011]	-0.013 [0.008]	-322 [453]	1.771*** [0.440]	0.042*** [0.011]	-0.023*** [0.011]	0.000 [0.003]

Note: Table 9 reports the estimates from equation (1) with varying levels of controls (Panel A) and for different samples (Panel B). The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.1: Summary Statistics

Variable	Mean		Difference	T-statistic
	DACA Eligible	DACA Ineligible		
Working	67.2	61.2	6.0	11.1
In Labor Force	75.1	67.7	7.4	13.9
Unemployed	10.5	9.6	0.9	2.9
Income	16,099	14,876	1,222	6.5
Hours Worked per Week	28.0	25.5	2.5	11.8
Worked in Past Year	76.2	70.1	6.1	12.4
Self-Employed	5.0	5.1	-0.1	-0.5
Attending School	30.1	35.4	-5.3	-8.5
GED	3.8	3.1	0.8	4.5
Years in US	10.6	6.1	4.4	106.4
Age Entered US	13.5	17.5	-4.0	-384.5
Male	54.8	55.0	-0.2	-0.4
White	71.1	65.3	5.7	8.4
Black	11.7	10.9	0.7	1.6
Asian	16.0	22.4	-6.3	-13.1
Hispanic Ethnicity	60.7	52.6	8.0	10.6
Home Language of Spanish	59.7	51.7	8.0	10.5
Born in Latin America	69.0	59.3	9.7	15.1
Age	24.1	23.6	0.5	11.6
Married	26.9	28.1	-1.1	-2.9
Live in a Metro Area	92.9	91.4	1.5	5.1
High School Degree	51.4	51.0	0.3	0.6
Some College	37.7	36.4	1.2	2.4
College Degree	11.0	12.5	-1.6	-5.0
Observations	29,454	73,311		

Note: The sample for the summary statistics includes non-citizens with at least a high school degree who were 12 to 19 years old when they entered the US and corresponds to the sample in Panel A of Table 2. All binary variables are represented in percent terms.

Table A.2: Summary Statistics

Variable	Mean		Difference	T-statistic
	DACA Eligible	DACA Ineligible		
Working	75.6	76.2	-0.6	-0.9
In Labor Force	82.4	83.2	-0.7	-1.4
Unemployed	8.3	8.3	-0.1	-0.2
Income	25,822	31,086	-5,263	-12.5
Hours Worked per Week	33.1	33.7	-0.6	-2.6
Worked in Past Year	83.2	83.4	-0.2	-0.4
Self-Employed	7.2	9.3	-2.1	-4.8
Attending School	10.7	7.8	2.9	6.0
GED	5.6	5.5	0.1	0.2
Years in US	20.8	24.8	-4.0	-50.7
Age Entered US	8.9	8.9	-0.1	-0.9
Male	54.5	55.7	-1.2	-1.9
White	73.7	73.3	0.4	0.6
Black	10.1	9.6	0.6	1.1
Asian	15.1	16.1	-1.1	-1.6
Hispanic Ethnicity	64.7	62.7	2.0	2.4
Home Language of Spanish	62.2	60.0	2.3	2.5
Born in Latin America	73.3	70.9	2.4	3.1
Age	29.6	33.7	-4.0	-205.6
Married	43.6	52.2	-8.6	-13.2
Live in a Metro Area	93.1	93.5	-0.4	-1.1
High School Degree	50.2	48.8	1.4	1.8
Some College	33.5	33.1	0.4	0.5
College Degree	16.4	18.1	-1.7	-3.5
Observations	20,942	12,294		

Note: The sample for the summary statistics includes non-citizens with at least a high school degree between the ages of 27 and 34 in June 2012 and corresponds to the sample in Panel B of Table 2. All binary variables are represented in percent terms.

Table A.3: Summary Statistics

Variable	Mean		Difference	T-statistic
	DACA Eligible	DACA Ineligible		
Working	65.3	71.8	-6.6	-18.5
In Labor Force	73.9	79.5	-5.6	-19.9
Unemployed	11.7	9.6	2.1	7.3
Income	15,787	24,655	-8,868	-54.7
Hours Worked per Week	27.1	30.9	-3.8	-22.8
Worked in Past Year	75.1	83.3	-8.2	-22.2
Self-Employed	4.7	4.6	0.1	0.9
Attending School	32.0	28.8	3.2	8.8
GED	3.9	4.5	-0.6	-5.6
Years in US	15.5	11.3	4.2	83.9
Age Entered US	8.4	17.0	-8.6	-174.3
Male	52.6	49.5	3.1	14.9
White	75.1	78.5	-3.4	-3.1
Black	9.3	14.2	-4.9	-5.9
Asian	14.5	6.2	8.3	17.2
Hispanic Ethnicity	65.4	15.0	50.3	53.2
Home Language of Spanish	63.6	11.6	52.0	49.4
Born in Latin America	72.4	5.3	67.1	80.2
Age	23.9	26.5	-2.6	-67.8
Married	24.0	32.6	-8.6	-25.8
Live in a Metro Area	92.4	79.2	13.2	25.8
High School Degree	49.8	31.7	18.2	41.8
Some College	40.2	42.0	-1.8	-4.7
College Degree	10.0	26.4	-16.4	-65.5
Observations	99,844	5,536,282		

Note: The sample for the summary statistics includes citizens and non-citizens with at least a high school degree between the ages of 18 and 35 and corresponds to the sample in Panel D of Table 2. All binary variables are represented in percent terms.

Table A.4: Pre-trends for Non-Citizens Age 27 to 34 in June 2012

Variables	Working		Labor Force		Unemployed		Income		Hours per Week		Worked in Past Year		Self-Employed		School	GED
Eligible*2014	0.025	0.014	-0.016	2,157	1.062	0.023	0.011	0.009	-0.006							
	[0.020]	[0.021]	[0.014]	[1,550]	[0.844]	[0.021]	[0.018]	[0.022]	[0.013]							
Eligible*2013	0.038**	0.012	-0.035**	-869	1.146	0.027	0.001	0.017	0.012							
	[0.018]	[0.016]	[0.015]	[1,545]	[0.800]	[0.019]	[0.017]	[0.021]	[0.019]							
Eligible*2011	-0.005	0.000	0.004	-512	0.316	0.010	-0.015	0.012	-0.009							
	[0.029]	[0.018]	[0.024]	[1,708]	[0.902]	[0.025]	[0.019]	[0.022]	[0.011]							
Eligible*2010	-0.009	-0.019	-0.010	141	-0.360	-0.013	-0.027	0.010	-0.013							
	[0.019]	[0.017]	[0.018]	[1,451]	[0.917]	[0.024]	[0.017]	[0.022]	[0.012]							
Eligible*2009	-0.029	-0.026	0.006	-169	-0.001	0.000	0.010	0.014	-0.004							
	[0.031]	[0.020]	[0.026]	[1,879]	[0.978]	[0.024]	[0.016]	[0.021]	[0.012]							
Eligible*2008	0.000	-0.004	-0.005	-765	0.151	0.002	0.001	-0.003	-0.008							
	[0.021]	[0.019]	[0.015]	[2,296]	[0.964]	[0.020]	[0.016]	[0.022]	[0.013]							
Eligible*2007	-0.026	-0.022	0.007	-2,705*	-0.084	0.004	-0.007	0.011	-							
	[0.019]	[0.022]	[0.014]	[1,460]	[1.109]	[0.023]	[0.015]	[0.020]	-							
Eligible*2006	-0.016	-0.020	-0.004	-1,031	-0.655	-0.005	-0.018	0.010	-							
	[0.020]	[0.022]	[0.016]	[1,528]	[0.829]	[0.020]	[0.017]	[0.021]	-							
Eligible*2005	-0.016	-0.037	-0.022	-661	-0.382	-0.014	-0.031*	0.038	-							
	[0.025]	[0.025]	[0.016]	[1,660]	[0.942]	[0.023]	[0.018]	[0.033]	-							
Observations	33,236	33,236	26,796	33,236	33,236	33,236	29,819	33,236	23,939							
R-squared	0.059	0.068	0.027	0.142	0.109	0.072	0.018	0.078	0.078							

Note: Table A.4 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2012 interaction is the omitted interaction. The estimation uses the sample from Panel B of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.5: Pre-trends for All Non-Citizens Age 18 to 35

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.054*** [0.010]	0.040*** [0.009]	-0.026*** [0.007]	-81 [1,269]	2.196*** [0.601]	0.052*** [0.011]	-0.007 [0.005]	0.000 [0.013]	0.004 [0.004]
Eligible*2013	0.029*** [0.010]	0.019*** [0.009]	-0.016* [0.008]	-657 [1,227]	1.218** [0.591]	0.031*** [0.011]	-0.009 [0.006]	0.008 [0.012]	0.006 [0.004]
Eligible*2011	-0.004 [0.011]	-0.001 [0.011]	0.003 [0.009]	453 [1,113]	0.425 [0.556]	-0.003 [0.011]	-0.005 [0.005]	0.001 [0.012]	0.001 [0.004]
Eligible*2010	-0.007 [0.013]	-0.007 [0.011]	0.001 [0.010]	355 [1,115]	0.464 [0.642]	0.002 [0.012]	-0.011* [0.006]	0.003 [0.012]	-0.002 [0.004]
Eligible*2009	0.007 [0.014]	0.000 [0.013]	-0.011 [0.008]	849 [1,222]	1.023 [0.682]	0.016 [0.013]	0.000 [0.005]	-0.001 [0.015]	0.007 [0.005]
Eligible*2008	0.012 [0.011]	-0.004 [0.011]	-0.022*** [0.008]	756 [1,086]	1.211* [0.618]	0.021* [0.012]	-0.008* [0.005]	0.009 [0.012]	0.004 [0.005]
Eligible*2007	0.009 [0.010]	-0.005 [0.009]	-0.019** [0.007]	843 [1,038]	0.993* [0.541]	0.020** [0.010]	-0.011** [0.005]	0.022* [0.013]	- -
Eligible*2006	0.009 [0.012]	-0.011 [0.012]	-0.026*** [0.007]	1,021 [974]	1.310** [0.623]	0.021* [0.012]	-0.007 [0.005]	0.021* [0.012]	- -
Eligible*2005	0.012 [0.014]	0.000 [0.011]	-0.017* [0.009]	1,392 [1,005]	1.056 [0.688]	0.025* [0.014]	-0.010** [0.005]	0.023** [0.011]	- -
Observations	438,710	438,710	308,368	438,710	438,710	438,710	355,205	438,710	306,442
R-squared	0.130	0.131	0.032	0.220	0.187	0.127	0.022	0.297	0.052

Note: Table A.5 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2012 interaction is the omitted interaction. The estimation uses the sample from Panel C of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.6: Pre-trends for Citizens and Non-Citizens

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.043*** [0.009]	0.034*** [0.009]	-0.021*** [0.007]	479 [852]	1.869*** [0.363]	0.050*** [0.009]	-0.009** [0.004]	0.013 [0.009]	0.008** [0.003]
Eligible*2013	0.015 [0.009]	0.011 [0.009]	-0.009 [0.007]	-407 [832]	0.767** [0.343]	0.024*** [0.009]	-0.010** [0.005]	0.014* [0.008]	0.007** [0.003]
Eligible*2011	-0.002 [0.010]	0.000 [0.012]	0.004 [0.008]	-27 [731]	0.297 [0.346]	0.000 [0.011]	-0.005 [0.005]	-0.006 [0.010]	0.001 [0.003]
Eligible*2010	0.002 [0.011]	0.004 [0.010]	0.003 [0.009]	462 [758]	0.612 [0.382]	0.006 [0.010]	-0.015*** [0.005]	-0.015* [0.008]	-0.006* [0.004]
Eligible*2009	0.018* [0.011]	0.014 [0.011]	-0.007 [0.007]	546 [957]	1.051*** [0.405]	0.020* [0.011]	-0.004 [0.004]	-0.017* [0.009]	0.005 [0.004]
Eligible*2008	0.016 [0.010]	0.011 [0.011]	-0.012 [0.007]	1,196 [730]	1.162*** [0.397]	0.020** [0.010]	-0.013** [0.005]	-0.008 [0.012]	0.003 [0.003]
Eligible*2007	0.014 [0.010]	0.008 [0.010]	-0.011* [0.007]	662 [738]	0.904** [0.397]	0.017* [0.010]	-0.015*** [0.006]	0.000 [0.008]	-
Eligible*2006	0.016* [0.010]	0.007 [0.011]	-0.016** [0.007]	1,186 [749]	1.274*** [0.382]	0.019* [0.010]	-0.017*** [0.005]	0.000 [0.008]	-
Eligible*2005	0.007 [0.012]	0.003 [0.012]	-0.007 [0.008]	780 [787]	0.707 [0.515]	0.018 [0.013]	-0.021*** [0.005]	0.016* [0.009]	-
Observations	5,636,126	5,636,126	4,411,763	5,636,126	5,636,126	5,636,126	5,111,496	5,636,126	4,048,401
R-squared	0.084	0.069	0.045	0.248	0.161	0.059	0.015	0.322	0.116

Note: Table A.6 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2012 interaction is the omitted interaction. The estimation uses the sample from Panel D of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.



Table A.7: The Effect of DACA for in Person Interview Subsample

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Entered US between Ages 12 and 19</b>									
Eligible*After	0.060*** [0.013]	0.045*** [0.013]	-0.025*** [0.009]	627 [548]	2.252*** [0.562]	0.052*** [0.014]	-0.007 [0.007]	-0.022** [0.011]	-0.001 [0.005]
Eligible	-0.029* [0.017]	-0.041** [0.018]	-0.010 [0.014]	-358 [350]	-0.612 [0.558]	-0.039*** [0.016]	-0.003 [0.008]	-0.074*** [0.015]	0.006 [0.006]
Observations	55,310	55,310	40,720	55,310	55,310	55,310	43,792	55,310	36,329
R-squared	0.151	0.157	0.035	0.188	0.222	0.158	0.018	0.391	0.036
<b>Panel B: Ages 27 to 34 in June 2012 and Entered US before Age 16</b>									
Eligible*After	0.053*** [0.018]	0.031* [0.016]	-0.031*** [0.012]	2,002* [1,101]	1.555** [0.635]	0.031** [0.015]	0.015 [0.013]	0.009 [0.010]	0.014 [0.012]
Eligible	0.014 [0.023]	0.016 [0.020]	0.000 [0.015]	-946 [1,371]	-0.011 [0.775]	0.009 [0.018]	-0.004 [0.015]	-0.012 [0.013]	0.008 [0.013]
Observations	18,001	18,001	15,121	18,001	18,001	18,001	16,100	18,001	12,684
R-squared	0.080	0.099	0.031	0.148	0.137	0.098	0.024	0.096	0.064
<b>Panel C: All Non-citizens Ages 18 to 35 with at Least a High School Degree</b>									
Eligible*After	0.046*** [0.007]	0.039*** [0.007]	-0.016*** [0.005]	-108 [477]	1.392*** [0.334]	0.039*** [0.007]	-0.004 [0.003]	-0.010 [0.006]	0.005** [0.003]
Eligible	0.048*** [0.007]	0.043*** [0.006]	-0.010* [0.005]	2,585*** [402]	1.488*** [0.265]	0.042*** [0.006]	0.009* [0.005]	-0.008 [0.006]	-0.002 [0.003]
Observations	211,033	211,033	156,521	211,033	211,033	211,033	168,740	211,033	139,876
R-squared	0.141	0.147	0.032	0.205	0.196	0.146	0.022	0.284	0.037
<b>Panel D: All Citizens and Non-citizens Ages 18 to 35 with at Least a High School Degree</b>									
Eligible*After	0.027*** [0.007]	0.019*** [0.006]	-0.014*** [0.004]	-211 [461]	0.669* [0.348]	0.026*** [0.008]	0.001 [0.003]	0.018*** [0.005]	0.009*** [0.002]
Eligible	-0.005 [0.003]	-0.012*** [0.003]	-0.007*** [0.002]	34 [167]	-0.193 [0.129]	-0.020*** [0.003]	0.013*** [0.002]	-0.020*** [0.003]	-0.019*** [0.002]
Observations	1,805,347	1,805,347	1,457,509	1,805,347	1,805,347	1,805,347	1,593,366	1,805,347	1,252,290
R-squared	0.072	0.060	0.044	0.230	0.152	0.066	0.017	0.284	0.089

Note: Table A.7 reports the estimates from equation (1) for four separate samples. All four samples are restricted to individuals with at least a high school degree and were selected for an in person interview. Panel A uses the sample of non-citizens who entered the United States between the ages of 12 and 19. Panel B uses the sample of non-citizens between the ages of 27 and 34 who arrived in the United States before the age of 16. Panel C uses the sample of non-citizens between the ages of 18 and 35. Panel D uses the sample of citizens and non-citizens between the ages of 18 and 35. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.8: The Effect of DACA on Survey Response Rates Age 27 to 34 in June 2012

Variables	Citizen	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*After	0.002 [0.009]	0.005 [0.009]	-0.006 [0.009]	0.000 [0.008]	0.015 [0.012]	-0.005 [0.008]	-0.001 [0.011]	-0.002 [0.009]	0.001 [0.007]	-0.004 [0.012]
Eligible	-0.006 [0.007]	-0.005 [0.007]	0.008 [0.012]	-0.003 [0.008]	-0.005 [0.011]	0.004 [0.010]	0.001 [0.008]	0.000 [0.011]	-0.009 [0.006]	0.001 [0.013]
Observations	33,236	33,236	33,236	26,796	33,236	33,236	33,236	33,236	33,236	23,939
R-squared	0.013	0.018	0.025	0.020	0.591	0.023	0.020	0.020	0.021	0.034

Note: Table A.8 reports the estimates from equation (1) with the outcome variable,  $Y_{it}$ , being an indicator variable equal to one if the survey question for the outcome variable of interest was not answered and the outcome variable of interest was imputed by the ACS. The indicator variable is equal to zero otherwise. The estimation uses the sample from Panel B of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Since the variable living with parents is created through linking individuals in the same household instead of an answer to a survey question no results exist for this variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.9: The Effect of DACA on Survey Response Rates for All Non-Citizens Age 18 to 35

Variables	Citizen	Working	Labor Force	Unemployed	Income	Hours per		Self-Employed	School	GED
						Week	Worked in Past Year			
Eligible*After	-0.004 [0.002]	-0.003 [0.003]	-0.003 [0.004]	-0.009*** [0.003]	0.043*** [0.005]	-0.006* [0.003]	-0.004 [0.003]	0.000 [0.004]	-0.002 [0.002]	-0.001 [0.005]
Eligible	0.001 [0.002]	-0.001 [0.002]	-0.011*** [0.003]	-0.002 [0.003]	-0.005 [0.003]	0.001 [0.003]	-0.003 [0.003]	-0.009*** [0.003]	0.002 [0.002]	-0.006 [0.004]
Observations	438,710	438,710	438,710	308,368	438,710	438,710	438,710	438,710	438,710	306,442
R-squared	0.010	0.014	0.010	0.014	0.647	0.015	0.013	0.009	0.011	0.032

Note: Table A.9 reports the estimates from equation (1) with the outcome variable,  $Y_{it}$ , being an indicator variable equal to one if the survey question for the outcome variable of interest was not answered and the outcome variable of interest was imputed by the ACS. The indicator variable is equal to zero otherwise. The estimation uses the sample from Panel C of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Since the variable living with parents is created through linking individuals in the same household instead of an answer to a survey question no results exist for this variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.10: The Effect of DACA on Survey Response Rates for Citizens and Non-Citizens

Variables	Citizen	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*After	-0.009*** [0.002]	-0.010*** [0.003]	-0.021*** [0.004]	-0.010*** [0.002]	0.035*** [0.006]	-0.012*** [0.003]	-0.013*** [0.003]	-0.017*** [0.003]	-0.008*** [0.002]	-0.008** [0.004]
Eligible	0.009*** [0.001]	0.001 [0.001]	0.008*** [0.002]	0.003** [0.001]	0.000 [0.002]	0.010*** [0.001]	0.002* [0.001]	0.003*** [0.001]	0.003*** [0.001]	0.029*** [0.002]
Observations	5,636,126	5,636,126	5,636,126	4,411,763	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	4,048,401
R-squared	0.013	0.017	0.015	0.015	0.650	0.011	0.017	0.012	0.012	0.013

Note: Table A.10 reports the estimates from equation (1) with the outcome variable,  $Y_{it}$ , being an indicator variable equal to one if the survey question for the outcome variable of interest was not answered and the outcome variable of interest was imputed by the ACS. The indicator variable is equal to zero otherwise. The estimation uses the sample from Panel D of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Since the variable living with parents is created through linking individuals in the same household instead of an answer to a survey question no results exist for this variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.11: The Change in Observable Characteristics between 2012 and 2013

Variables	Male	White	Black	Asian	Hispanic	Mexican	Latin American	Speaks Spanish	Age	Married	High School	Some College	College Degree	Years in US	Age Entered US
<b>Panel A: Entered US between Ages 12 and 19</b>															
Eligible*2013	-0.020	0.011	-0.015	0.001	0.019	-0.006	0.012	0.011	0.291***	0.005	-0.015	0.001	0.014	0.277***	0.014
	[0.015]	[0.016]	[0.012]	[0.013]	[0.016]	[0.024]	[0.015]	[0.016]	[0.103]	[0.012]	[0.018]	[0.016]	[0.009]	[0.089]	[0.036]
Observations	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765	102,765
R-squared	0.003	0.057	0.071	0.052	0.087	0.180	0.086	0.087	0.018	0.015	0.017	0.009	0.009	0.269	0.672
<b>Panel B: Ages 27 to 34 in June 2012 and Entered US before Age 16</b>															
Eligible*2013	-0.016	0.026*	-0.003	-0.021	0.021	0.038***	0.018	0.015	-0.049	-0.003	0.002	-0.012	0.010	-0.022	-0.024
	[0.015]	[0.014]	[0.009]	[0.013]	[0.015]	[0.013]	[0.013]	[0.016]	[0.047]	[0.014]	[0.019]	[0.020]	[0.013]	[0.282]	[0.267]
Observations	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236	33,236
R-squared	0.005	0.098	0.156	0.055	0.135	0.272	0.081	0.120	0.723	0.022	0.013	0.005	0.025	0.140	0.012
<b>Panel C: All Non-citizens Ages 18 to 35 with at Least a High School Degree</b>															
Eligible*2013	-0.007	0.015	-0.013	-0.003	0.019	0.012	0.012	0.015	0.208**	0.012	-0.001	-0.002	0.003	0.260*	-0.051
	[0.010]	[0.028]	[0.013]	[0.018]	[0.026]	[0.040]	[0.019]	[0.027]	[0.100]	[0.009]	[0.013]	[0.008]	[0.011]	[0.115]	[0.115]
Observations	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710	438,710
R-squared	0.001	0.059	0.054	0.059	0.112	0.187	0.113	0.107	0.171	0.060	0.026	0.022	0.078	0.333	0.572
<b>Panel D: All Citizens and Non-citizens Ages 18 to 35 with at Least a High School Degree</b>															
Eligible*2013	-0.006	0.013	-0.013	-0.001	0.021	0.015	0.011	0.017	0.203	0.012	-0.001	-0.003	0.004	0.263**	-0.050
	[0.010]	[0.042]	[0.026]	[0.022]	[0.034]	[0.056]	[0.034]	[0.036]	[0.177]	[0.012]	[0.014]	[0.014]	[0.009]	[0.121]	[0.149]
Observations	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	5,636,126	731,332	731,332
R-squared	0.000	0.043	0.059	0.058	0.143	0.165	0.167	0.117	0.006	0.008	0.008	0.004	0.015	0.039	0.120

Note: Table A.11 reports the estimates from the same specification as Table 3 except without controls. The 2012 year binary variable interacted with the DACA-eligible variable is the omitted variable in the specification and the coefficient on the 2013 interaction is the reported coefficient. The coefficients shows how the observed characteristics of the DACA-eligible group changed from before DACA was available to after DACA was available. All four samples are restricted to individuals with at least a high school degree. Panel A uses the sample of non-citizens who entered the United States between the ages of 12 and 19. Panel B uses the sample of non-citizens between the ages of 27 and 34 who arrived in the United States before the age of 16. Panel C uses the sample of non-citizens between the ages of 18 and 35. Panel D uses the sample of citizens and non-citizens between the ages of 18 and 35. Each column indicates the outcome variable of interest. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.12: Subsample Analysis for Non-Citizens Age 27 to 34 in June 2012

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Below Median Income	0.046** [0.021]	0.036* [0.021]	-0.026 [0.020]	278 [357]	1.599* [0.835]	0.043** [0.021]	0.009 [0.017]	0.010 [0.013]	0.026* [0.015]
Above Median Income	0.028*** [0.009]	0.011** [0.005]	-0.017*** [0.006]	759 [1,676]	0.303 [0.443]	0.003 [0.004]	0.027** [0.013]	-0.005 [0.012]	-0.008 [0.010]
Below 90th Income	0.041*** [0.014]	0.025* [0.014]	-0.023** [0.010]	-172 [533]	0.979* [0.513]	0.026** [0.013]	0.019* [0.010]	0.004 [0.011]	0.012 [0.010]
Hispanic	0.045*** [0.017]	0.032** [0.015]	-0.019 [0.012]	1,168 [879]	1.612*** [0.574]	0.034** [0.015]	0.009 [0.011]	-0.009 [0.009]	0.019* [0.011]
Mexican	0.027 [0.020]	0.021 [0.017]	-0.009 [0.014]	1,199 [1,028]	0.856 [0.738]	0.027 [0.017]	-0.009 [0.012]	-0.003 [0.009]	0.024* [0.013]
Women	0.054** [0.021]	0.054** [0.023]	-0.008 [0.013]	304 [1,111]	1.092 [0.869]	0.043** [0.022]	0.024* [0.013]	-0.001 [0.015]	0.013 [0.012]
Men	0.037** [0.016]	0.008 [0.013]	-0.034*** [0.012]	2,077 [1,526]	1.270* [0.704]	0.014 [0.012]	0.015 [0.014]	0.004 [0.010]	0.004 [0.011]
Less Educated	0.040** [0.016]	0.023 [0.017]	-0.023** [0.010]	399 [884]	1.182** [0.527]	0.025* [0.014]	0.015 [0.010]	- [0.010]	- [0.010]
Highly Educated	0.073*** [0.028]	0.054** [0.027]	-0.026 [0.019]	6,744** [2,887]	1.267 [1.225]	0.034 [0.023]	0.032 [0.021]	- [0.021]	- [0.021]

Note: Table A.12 reports the estimates from equation (1) for different subsamples. The estimation uses the sample from Panel B of Table 2. Each column indicates the outcome variable of interest. Each row indicates the subsample being used and reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.13: Subsample Analysis for All Non-Citizens Age 18 to 35

Variables	Working	Labor Force	Hours per Week		Unemployed	Income	Worked in Past Year	Self-Employed	School	GED
			Unemployed	Income						
Below Median Income	0.055*** [0.008]	0.050*** [0.007]	-0.027*** [0.010]	251*** [81]	1.515*** [0.305]	0.048*** [0.009]	-0.013*** [0.004]	-0.013* [0.007]	0.002 [0.003]	
Above Median Income	0.016*** [0.004]	0.012*** [0.003]	-0.005 [0.003]	-2,781*** [1,063]	0.197 [0.197]	0.008*** [0.002]	0.005 [0.003]	0.004 [0.007]	0.004 [0.003]	
Below 90th Income	0.043*** [0.006]	0.039*** [0.006]	-0.011*** [0.004]	225 [185]	1.186*** [0.286]	0.036*** [0.006]	-0.003 [0.003]	-0.010 [0.006]	0.003 [0.002]	
Hispanic	0.036*** [0.007]	0.034*** [0.006]	-0.008 [0.005]	-627** [298]	0.987*** [0.253]	0.033*** [0.007]	-0.011*** [0.004]	-0.006 [0.006]	0.004 [0.003]	
Mexican	0.040*** [0.008]	0.043*** [0.006]	-0.003 [0.006]	-411 [318]	1.205*** [0.286]	0.038*** [0.007]	-0.014** [0.006]	-0.010 [0.007]	0.005 [0.003]	
Women	0.032*** [0.008]	0.034*** [0.008]	-0.004 [0.005]	-563 [549]	0.713* [0.421]	0.028*** [0.009]	0.002 [0.004]	-0.002 [0.008]	0.002 [0.003]	
Men	0.037*** [0.007]	0.029*** [0.006]	-0.014** [0.006]	-1,561* [897]	1.004*** [0.345]	0.028*** [0.008]	-0.005 [0.003]	-0.008 [0.008]	0.004 [0.003]	
Less Educated	0.036*** [0.006]	0.033*** [0.006]	-0.009** [0.004]	-220 [256]	1.198*** [0.310]	0.034*** [0.007]	-0.005 [0.003]	-	-	
Highly Educated	0.031** [0.013]	0.024** [0.012]	-0.011* [0.006]	-3,030*** [1,396]	0.033 [0.472]	0.011 [0.011]	0.009 [0.007]	-	-	

Note: Table A.13 reports the estimates from equation (1) for different subsamples. The estimation uses the sample from Panel C of Table 2. Each column indicates the outcome variable of interest. Each row indicates the subsample being used and reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.14: Subsample Analysis for Citizens and Non-Citizens

Variables	Working	Labor Force	Hours per		Worked in Past Year	Self-Employed	School	GED	
			Unemployed	Income					Week
Below Median Income	0.034*** [0.007]	0.031*** [0.006]	-0.015** [0.006]	159** [80]	1.400*** [0.342]	0.047*** [0.009]	-0.004 [0.003]	0.016** [0.006]	0.008*** [0.003]
Above Median Income	0.009*** [0.003]	0.003 [0.002]	-0.007*** [0.003]	-924 [848]	-0.114 [0.128]	0.003* [0.001]	0.007* [0.004]	0.020*** [0.006]	0.006* [0.004]
Below 90th Income	0.023*** [0.006]	0.019*** [0.005]	-0.010*** [0.004]	28 [167]	0.769*** [0.270]	0.028*** [0.007]	0.001 [0.003]	0.018*** [0.005]	0.007*** [0.002]
Hispanic	0.027*** [0.007]	0.026*** [0.006]	-0.006 [0.004]	-418 [323]	0.832** [0.335]	0.031*** [0.008]	-0.002 [0.003]	0.012** [0.005]	0.010*** [0.002]
Mexican	0.031*** [0.007]	0.031*** [0.006]	-0.004 [0.004]	-275 [392]	1.003*** [0.384]	0.033*** [0.009]	-0.006 [0.004]	0.009* [0.005]	0.010*** [0.003]
Women	0.020*** [0.007]	0.021*** [0.007]	-0.005 [0.005]	-748* [416]	0.454 [0.298]	0.029*** [0.008]	0.001 [0.003]	0.020*** [0.007]	0.007** [0.003]
Men	0.024*** [0.006]	0.015*** [0.005]	-0.013*** [0.005]	-282 [638]	0.808*** [0.284]	0.024*** [0.006]	0.002 [0.003]	0.015*** [0.006]	0.008** [0.003]
Less Educated	0.027*** [0.006]	0.023*** [0.005]	-0.010*** [0.004]	-12 [319]	0.986*** [0.291]	0.034*** [0.007]	0.000 [0.003]	- -	- -
Highly Educated	0.002 [0.012]	-0.004 [0.011]	-0.007 [0.006]	-1,751 [1,146]	-0.582 [0.442]	-0.009 [0.009]	0.011* [0.006]	- -	- -

Note: Table A.14 reports the estimates from equation (1) for different subsamples. The estimation uses the sample from Panel D of Table 2. Each column indicates the outcome variable of interest. Each row indicates the subsample being used and reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.



Table A.15: Robustness Checks for Ages 27 to 34 in June 2012

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Different Sets of Control Variables</b>									
No Controls	0.043*** [0.013]	0.026** [0.012]	-0.024*** [0.009]	797 [893]	1.001** [0.495]	0.024** [0.011]	0.017* [0.010]	0.005 [0.010]	0.006 [0.010]
Demographic Controls	0.045*** [0.013]	0.029** [0.012]	-0.022** [0.009]	1,309 [906]	1.176** [0.489]	0.027** [0.011]	0.017 [0.010]	0.003 [0.010]	0.008 [0.010]
Year and State FE	0.046*** [0.013]	0.030** [0.012]	-0.022*** [0.008]	1,389 [913]	1.208** [0.488]	0.027** [0.011]	0.017* [0.010]	0.002 [0.010]	0.010 [0.010]
State Time Trends (Baseline)	0.044*** [0.013]	0.028** [0.012]	-0.022*** [0.008]	1,397 [904]	1.184** [0.486]	0.027** [0.011]	0.017* [0.010]	0.002 [0.010]	0.009 [0.010]
<b>Panel B: Different Samples</b>									
Age: 29 to 32	0.032 [0.025]	0.019 [0.021]	-0.019 [0.016]	1,809 [1,304]	1.010 [0.837]	0.023 [0.019]	0.019 [0.016]	-0.006 [0.014]	0.010 [0.012]
Age: to 25 to 36	0.037*** [0.011]	0.018** [0.009]	-0.025*** [0.007]	1,125 [774]	0.936** [0.399]	0.019** [0.009]	0.010 [0.008]	0.004 [0.008]	0.001 [0.007]
All Education Levels	0.018* [0.011]	0.011 [0.010]	-0.010 [0.007]	645 [727]	0.315 [0.426]	0.011 [0.010]	0.004 [0.009]	0.005 [0.008]	0.009 [0.008]
Married	0.035** [0.015]	0.024* [0.012]	-0.017 [0.013]	1,148 [1,235]	0.911 [0.646]	0.020 [0.013]	0.034** [0.016]	-0.003 [0.011]	0.012 [0.013]
Single	0.054*** [0.019]	0.035* [0.020]	-0.027* [0.014]	1,810 [1,158]	1.570** [0.749]	0.036** [0.016]	0.006 [0.013]	0.004 [0.014]	0.009 [0.012]

Note: Table A.15 reports the estimates from equation (1) with varying levels of controls (Panel A) and for different samples (Panel B). The estimation uses the sample from Panel B of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.16: Robustness Checks for Non-Citizens Ages 18 to 35

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Different Sets of Control Variables</b>									
No Controls	0.048*** [0.006]	0.043*** [0.006]	-0.012*** [0.005]	-2,328*** [678]	1.506*** [0.315]	0.040*** [0.007]	0.000 [0.003]	-0.035*** [0.008]	0.006** [0.003]
Demographic Controls	0.037*** [0.006]	0.033*** [0.005]	-0.010** [0.004]	-1,210* [650]	0.946*** [0.318]	0.030*** [0.006]	-0.002 [0.003]	-0.006 [0.007]	0.003 [0.002]
Year and State FE	0.036*** [0.006]	0.032*** [0.005]	-0.010** [0.004]	-1,065 [666]	0.903*** [0.321]	0.029*** [0.006]	-0.002 [0.003]	-0.006 [0.007]	0.003 [0.002]
State Time Trends (Baseline)	0.037*** [0.006]	0.033*** [0.005]	-0.010** [0.004]	-1,045 [672]	0.931*** [0.317]	0.030*** [0.006]	-0.002 [0.003]	-0.005 [0.006]	0.003 [0.002]
<b>Panel B: Different Samples</b>									
All Education Levels	0.030*** [0.006]	0.031*** [0.006]	-0.003 [0.005]	-598 [426]	0.791*** [0.305]	0.025*** [0.007]	-0.003 [0.003]	-0.003 [0.006]	0.004* [0.002]
Married	0.029*** [0.007]	0.021** [0.008]	-0.014** [0.005]	-1,082 [877]	0.682** [0.341]	0.021*** [0.007]	0.005 [0.005]	0.012* [0.007]	0.004 [0.005]
Single	0.046*** [0.007]	0.043*** [0.006]	-0.011* [0.006]	-940 [650]	1.259*** [0.353]	0.039*** [0.007]	-0.004* [0.003]	-0.019** [0.008]	0.003 [0.002]

Note: Table A.16 reports the estimates from equation (1) with varying levels of controls (Panel A) and for different samples (Panel B). The estimation uses the sample from Panel C of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.17: Robustness Checks for Citizens and Non-Citizens

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Different Sets of Control Variables</b>									
No Controls	0.028*** [0.006]	0.022*** [0.005]	-0.012** [0.005]	-659* [364]	0.965*** [0.289]	0.029*** [0.007]	0.002 [0.002]	0.000 [0.008]	0.009*** [0.002]
Demographic Controls	0.021*** [0.005]	0.017*** [0.005]	-0.009** [0.004]	-906** [431]	0.617*** [0.234]	0.025*** [0.006]	0.001 [0.002]	0.017*** [0.005]	0.007*** [0.002]
Year and State FE	0.020*** [0.005]	0.016*** [0.004]	-0.008** [0.004]	-671 [504]	0.513** [0.245]	0.023*** [0.006]	0.002 [0.003]	0.017*** [0.005]	0.007*** [0.002]
State Time Trends (Baseline)	0.021*** [0.005]	0.017*** [0.004]	-0.009*** [0.004]	-529 [490]	0.600** [0.256]	0.025*** [0.006]	0.002 [0.003]	0.017*** [0.005]	0.007*** [0.002]
<b>Panel B: Different Samples</b>									
All Education Levels	0.021*** [0.005]	0.017*** [0.004]	-0.009*** [0.004]	-529 [490]	0.600** [0.256]	0.025*** [0.006]	0.002 [0.003]	0.017*** [0.005]	0.007*** [0.002]
Married	0.014 [0.009]	0.005 [0.010]	-0.014** [0.005]	-1,694* [909]	-0.045 [0.374]	0.010 [0.009]	0.009* [0.005]	0.016** [0.008]	0.008* [0.004]
Single	0.025*** [0.006]	0.022*** [0.005]	-0.008 [0.005]	-34 [407]	0.937*** [0.285]	0.032*** [0.007]	-0.001 [0.003]	0.017*** [0.006]	0.007*** [0.002]

Note: Table A.17 reports the estimates from equation (1) with varying levels of controls (Panel A) and for different samples (Panel B). The estimation uses the sample from Panel D of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.18: Pre-trends for Non-Citizens for Age Entered the US 12 to 19

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.067*** [0.018]	0.049*** [0.016]	-0.028** [0.012]	720 [770]	3.033*** [0.644]	0.063*** [0.018]	0.005 [0.009]	-0.021 [0.013]	0.004 [0.006]
Eligible*2013	0.044*** [0.016]	0.010 [0.017]	-0.048*** [0.013]	121 [692]	1.619** [0.690]	0.041*** [0.016]	-0.008 [0.008]	-0.014 [0.015]	0.001 [0.005]
Eligible*2012	0.011 [0.015]	0.008 [0.015]	-0.008 [0.012]	439 [757]	0.655 [0.626]	0.022 [0.014]	0.000 [0.008]	-0.026** [0.012]	-0.001 [0.006]
Eligible*2010	0.013 [0.015]	-0.003 [0.017]	-0.021 [0.016]	389 [533]	0.988* [0.570]	0.024* [0.013]	0.004 [0.007]	0.003 [0.018]	0.000 [0.005]
Eligible*2009	0.022 [0.017]	0.013 [0.015]	-0.014 [0.013]	918 [686]	1.604*** [0.601]	0.028* [0.015]	0.012 [0.008]	-0.001 [0.013]	0.009 [0.005]
Eligible*2008	0.025* [0.013]	-0.006 [0.012]	-0.037*** [0.012]	831 [632]	1.243** [0.552]	0.024* [0.012]	0.000 [0.008]	-0.006 [0.015]	0.005 [0.007]
Eligible*2007	0.009 [0.013]	-0.007 [0.013]	-0.018 [0.013]	337 [554]	-0.057 [0.513]	0.007 [0.013]	-0.005 [0.008]	0.015 [0.015]	-
Eligible*2006	-0.016 [0.016]	-0.046*** [0.015]	-0.030*** [0.011]	-541 [650]	-0.089 [0.594]	-0.010 [0.015]	0.005 [0.008]	0.026** [0.013]	-
Eligible*2005	-0.004 [0.018]	-0.027* [0.016]	-0.023* [0.014]	1,115** [558]	0.578 [0.613]	0.015 [0.017]	0.011 [0.008]	0.017 [0.019]	-
Observations	102,765	102,765	68,831	102,765	102,765	102,765	79,454	102,765	72,117
R-squared	0.145	0.151	0.033	0.200	0.224	0.138	0.017	0.414	0.042

Note: Table A.18 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2011 interaction is the omitted interaction. The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.19: Pre-trends for Non-Citizens Age 27 to 34

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.030 [0.030]	0.014 [0.022]	-0.020 [0.023]	2,670* [1,484]	0.746 [0.905]	0.013 [0.024]	0.026 [0.019]	-0.003 [0.017]	0.003 [0.011]
Eligible*2013	0.043 [0.029]	0.012 [0.018]	-0.039* [0.023]	-357 [1,481]	0.830 [0.874]	0.018 [0.024]	0.016 [0.018]	0.005 [0.016]	0.021 [0.018]
Eligible*2012	0.005 [0.029]	0.000 [0.018]	-0.004 [0.024]	512 [1,708]	-0.316 [0.902]	-0.010 [0.025]	0.015 [0.019]	-0.012 [0.022]	0.009 [0.011]
Eligible*2010	-0.004 [0.029]	-0.019 [0.019]	-0.014 [0.026]	654 [1,396]	-0.676 [0.974]	-0.023 [0.028]	-0.012 [0.018]	-0.003 [0.016]	-0.004 [0.010]
Eligible*2009	-0.024 [0.039]	-0.026 [0.022]	0.002 [0.032]	342 [1,841]	-0.317 [1.035]	-0.010 [0.027]	0.024 [0.017]	0.002 [0.015]	0.005 [0.011]
Eligible*2008	0.004 [0.031]	-0.004 [0.021]	-0.009 [0.024]	-252 [2,268]	-0.165 [1.020]	-0.008 [0.025]	0.016 [0.017]	-0.015 [0.017]	0.001 [0.011]
Eligible*2007	-0.021 [0.030]	-0.022 [0.023]	0.003 [0.023]	-2,192 [1,411]	-0.399 [1.162]	-0.006 [0.027]	0.007 [0.016]	-0.001 [0.014]	-
Eligible*2006	-0.012 [0.030]	-0.020 [0.023]	-0.008 [0.025]	-519 [1,482]	-0.971 [0.896]	-0.015 [0.024]	-0.004 [0.018]	-0.002 [0.016]	-
Eligible*2005	-0.011 [0.033]	-0.037 [0.026]	-0.026 [0.025]	-148 [1,616]	-0.698 [1.005]	-0.023 [0.026]	-0.016 [0.019]	0.026 [0.029]	-
Observations	33,236	33,236	26,796	33,236	33,236	33,236	29,819	33,236	23,939
R-squared	0.059	0.068	0.027	0.142	0.109	0.072	0.018	0.078	0.078

Note: Table A.19 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2011 interaction is the omitted interaction. The estimation uses the sample from Panel B of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.20: Pre-trends for All Non-Citizens Age 18 to 35

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.058*** [0.009]	0.041*** [0.010]	-0.029*** [0.007]	-534 [1,145]	1.771*** [0.491]	0.055*** [0.010]	-0.003 [0.004]	0.000 [0.011]	0.002 [0.003]
Eligible*2013	0.032*** [0.009]	0.020** [0.010]	-0.020** [0.008]	-1,111 [1,101]	0.793* [0.476]	0.034*** [0.010]	-0.004 [0.005]	0.007 [0.010]	0.005 [0.004]
Eligible*2012	0.004 [0.011]	0.001 [0.011]	-0.003 [0.009]	-453 [1,113]	-0.425 [0.556]	0.003 [0.011]	0.005 [0.005]	-0.001 [0.012]	-0.001 [0.004]
Eligible*2010	-0.003 [0.012]	-0.006 [0.011]	-0.002 [0.010]	-97 [975]	0.039 [0.540]	0.004 [0.012]	-0.006 [0.005]	0.002 [0.010]	-0.003 [0.003]
Eligible*2009	0.011 [0.013]	0.001 [0.013]	-0.014* [0.008]	395 [1,098]	0.598 [0.588]	0.018 [0.013]	0.005 [0.004]	-0.002 [0.013]	0.006 [0.004]
Eligible*2008	0.015 [0.010]	-0.003 [0.011]	-0.026*** [0.008]	302 [948]	0.786 [0.512]	0.024*** [0.011]	-0.003 [0.003]	0.008 [0.010]	0.002 [0.004]
Eligible*2007	0.012 [0.009]	-0.004 [0.010]	-0.022*** [0.007]	390 [889]	0.568 [0.416]	0.022** [0.009]	-0.006 [0.004]	0.021* [0.011]	- -
Eligible*2006	0.012 [0.011]	-0.010 [0.013]	-0.029*** [0.006]	567 [818]	0.885* [0.518]	0.024** [0.011]	-0.002 [0.004]	0.020** [0.010]	- -
Eligible*2005	0.015 [0.013]	0.001 [0.011]	-0.020** [0.009]	939 [856]	0.631 [0.593]	0.027** [0.013]	-0.005 [0.004]	0.022** [0.009]	- -
Observations	438,710	438,710	308,368	438,710	438,710	438,710	355,205	438,710	306,442
R-squared	0.130	0.131	0.032	0.220	0.187	0.127	0.022	0.297	0.052

Note: Table A.20 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2011 interaction is the omitted interaction. The estimation uses the sample from Panel C of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.21: Pre-trends for Citizens and Non-Citizens Age 18 to 35

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
Eligible*2014	0.046*** [0.008]	0.034*** [0.010]	-0.025*** [0.006]	506 [778]	1.572*** [0.369]	0.050*** [0.011]	-0.004 [0.004]	0.018* [0.011]	0.007*** [0.003]
Eligible*2013	0.017** [0.009]	0.011 [0.010]	-0.013** [0.006]	-380 [758]	0.470 [0.349]	0.024** [0.010]	-0.005 [0.005]	0.019** [0.010]	0.007*** [0.003]
Eligible*2012	0.002 [0.010]	0.000 [0.012]	-0.004 [0.008]	27 [731]	-0.297 [0.346]	0.000 [0.011]	0.005 [0.005]	0.006 [0.010]	-0.001 [0.003]
Eligible*2010	0.005 [0.010]	0.004 [0.011]	-0.002 [0.009]	489 [675]	0.314 [0.388]	0.006 [0.012]	-0.010* [0.005]	-0.010 [0.010]	-0.007* [0.003]
Eligible*2009	0.021* [0.011]	0.015 [0.012]	-0.012* [0.007]	573 [892]	0.753* [0.410]	0.020 [0.012]	0.001 [0.004]	-0.012 [0.010]	0.004 [0.004]
Eligible*2008	0.019** [0.009]	0.011 [0.012]	-0.016** [0.007]	1,223* [646]	0.864** [0.402]	0.020* [0.011]	-0.008* [0.005]	-0.003 [0.013]	0.002 [0.003]
Eligible*2007	0.016* [0.009]	0.009 [0.011]	-0.016*** [0.006]	689 [656]	0.606 [0.402]	0.018 [0.011]	-0.011* [0.005]	0.006 [0.010]	- -
Eligible*2006	0.019** [0.009]	0.007 [0.012]	-0.020*** [0.006]	1,213* [671]	0.977** [0.388]	0.019* [0.011]	-0.013*** [0.004]	0.005 [0.010]	- -
Eligible*2005	0.010 [0.012]	0.003 [0.012]	-0.011 [0.007]	807 [713]	0.409 [0.517]	0.018 [0.014]	-0.016*** [0.005]	0.022** [0.010]	- -
Observations	5,636,126	5,636,126	4,411,763	5,636,126	5,636,126	5,636,126	5,111,496	5,636,126	4,048,401
R-squared	0.084	0.069	0.045	0.248	0.161	0.059	0.015	0.322	0.116

Note: Table A.21 reports the estimates from equation (1) with *Eligible* interacted with each year. The 2011 interaction is the omitted interaction. The estimation uses the sample from Panel D of Table 2. Each column indicates the outcome variable of interest. Each row reports the estimated coefficient on the given interaction term. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.22: Estimates by Occupation Formality for Age Entered the US 12 to 19

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Formal Occupations</b>									
Eligible*After	0.018 [0.013]	0.016 [0.012]	-0.004 [0.009]	-650 [986]	1.334** [0.533]	0.003 [0.010]	-0.003 [0.006]	0.001 [0.015]	0.002 [0.004]
Eligible	-0.020 [0.018]	-0.029** [0.014]	-0.008 [0.015]	-663 [507]	-0.234 [0.541]	0.000 [0.011]	0.004 [0.005]	-0.051*** [0.016]	0.009* [0.005]
Observations	38,308	38,308	31,606	38,308	38,308	38,308	38,308	38,308	26,359
R-squared	0.050	0.059	0.018	0.211	0.154	0.026	0.018	0.335	0.058
<b>Panel B: Informal Occupations</b>									
Eligible*After	0.029** [0.015]	0.003 [0.012]	-0.029*** [0.009]	-407 [606]	0.416 [0.459]	0.013 [0.010]	-0.009 [0.008]	-0.012 [0.012]	-0.006 [0.008]
Eligible	0.007 [0.018]	-0.007 [0.015]	-0.015 [0.013]	-737 [509]	1.799*** [0.543]	0.020 [0.013]	-0.008 [0.011]	-0.045** [0.018]	-0.006 [0.011]
Observations	31,339	31,339	26,951	31,339	31,339	31,339	31,339	31,339	21,309
R-squared	0.068	0.076	0.022	0.169	0.161	0.053	0.026	0.346	0.033

Note: Table A.22 reports the estimates from equation (1) for the subsample of individuals who worked in the last five years in a formal occupation (Panel A) and the subsample of individuals who worked in the last five years in an informal occupation (Panel B). The estimation uses the sample from Panel A of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.



Table A.23: Estimates by Occupation Formality for Non-Citizens Age 27 to 34

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Formal Occupations</b>									
Eligible*After	0.038** [0.016]	0.018 [0.012]	-0.024* [0.012]	888 [1,607]	0.190 [0.608]	0.009 [0.011]	0.020 [0.014]	-0.009 [0.017]	0.010 [0.011]
Eligible	0.016 [0.022]	0.004 [0.017]	-0.012 [0.017]	-1,032 [1,850]	-0.025 [0.716]	0.013 [0.015]	0.008 [0.015]	-0.034** [0.017]	0.009 [0.013]
Observations	16,236	16,236	14,517	16,236	16,236	16,236	16,236	16,236	11,415
R-squared	0.034	0.037	0.029	0.145	0.078	0.033	0.026	0.083	0.101
<b>Panel B: Informal Occupations</b>									
Eligible*After	0.037* [0.022]	0.025 [0.018]	-0.016 [0.016]	1,938** [982]	1.633* [0.879]	0.028* [0.016]	0.026 [0.018]	0.018 [0.012]	0.020 [0.017]
Eligible	0.000 [0.028]	-0.015 [0.020]	-0.016 [0.023]	128 [1,575]	0.745 [0.990]	0.018 [0.018]	-0.017 [0.027]	0.009 [0.011]	0.025 [0.021]
Observations	8,321	8,321	7,252	8,321	8,321	8,321	8,321	8,321	6,113
R-squared	0.056	0.061	0.043	0.107	0.108	0.057	0.043	0.091	0.079

Note: Table A.23 reports the estimates from equation (1) for the subsample of individuals who worked in the last five years in a formal occupation (Panel A) and the subsample of individuals who worked in the last five years in an informal occupation (Panel B). The estimation uses the sample from Panel B of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.24: Estimates by Occupation Formality for All Non-Citizens Age 18 to 35

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Formal Occupations</b>									
Eligible*After	0.027*** [0.007]	0.019*** [0.005]	-0.010** [0.004]	-2,971** [1,339]	0.208 [0.387]	0.015*** [0.005]	0.001 [0.003]	0.010 [0.010]	0.006** [0.003]
Eligible	0.059*** [0.006]	0.054*** [0.005]	-0.009** [0.005]	10,542*** [733]	2.203*** [0.237]	0.033*** [0.005]	0.005 [0.004]	-0.055*** [0.007]	-0.007** [0.004]
Observations	199,849	199,849	168,315	199,849	199,849	199,849	199,849	199,849	138,415
R-squared	0.057	0.060	0.020	0.239	0.120	0.042	0.021	0.241	0.072
<b>Panel B: Informal Occupations</b>									
Eligible*After	0.029*** [0.007]	0.015*** [0.006]	-0.017*** [0.005]	-39 [300]	0.783*** [0.267]	0.019*** [0.005]	-0.007 [0.006]	-0.004 [0.007]	0.004 [0.005]
Eligible	0.014 [0.009]	0.006 [0.006]	-0.009 [0.007]	338 [444]	-0.290 [0.256]	0.002 [0.005]	0.007 [0.007]	0.018*** [0.006]	-0.001 [0.006]
Observations	107,209	107,209	92,469	107,209	107,209	107,209	107,209	107,209	73,181
R-squared	0.055	0.061	0.018	0.153	0.131	0.046	0.034	0.261	0.035

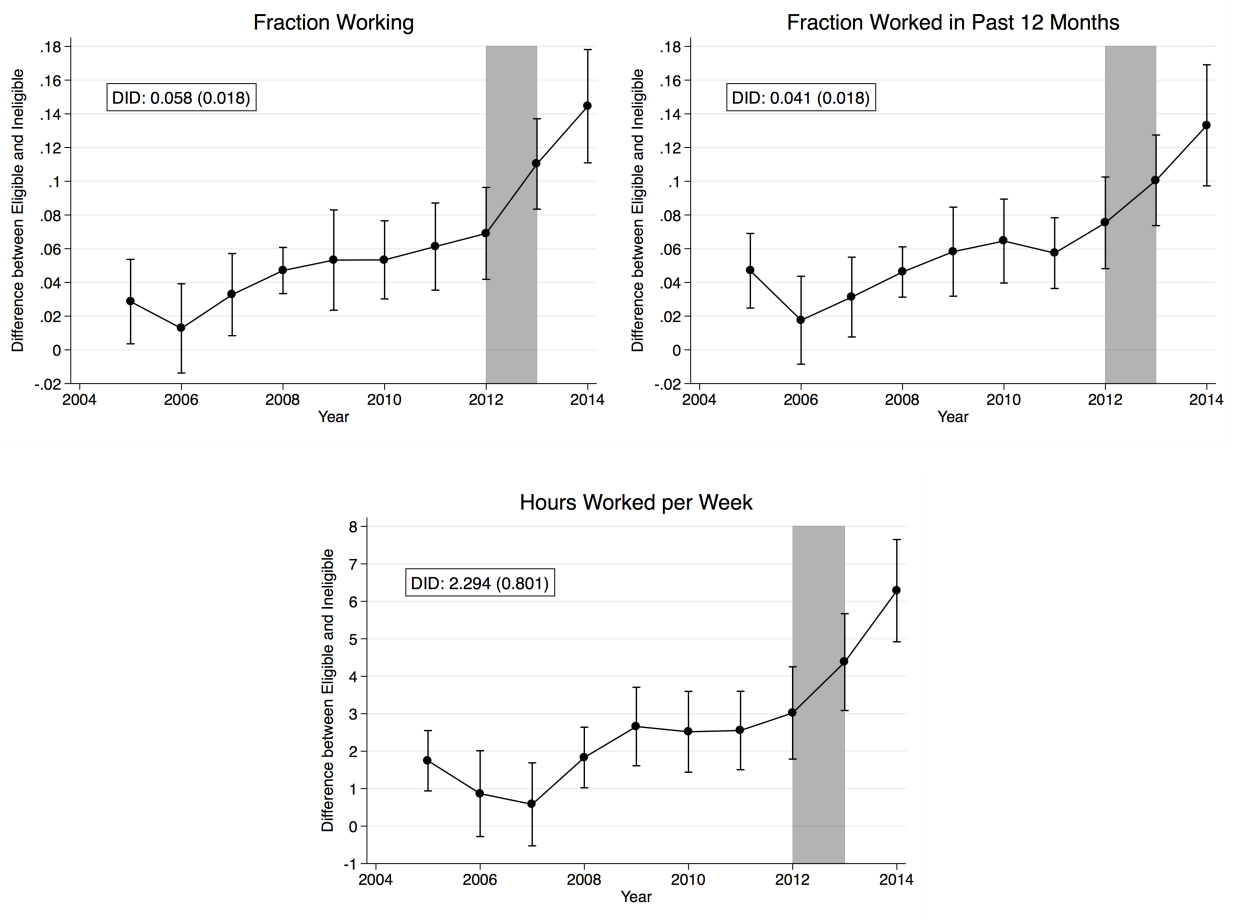
Note: Table A.24 reports the estimates from equation (1) for the subsample of individuals who worked in the last five years in a formal occupation (Panel A) and the subsample of individuals who worked in the last five years in an informal occupation (Panel B). The estimation uses the sample from Panel C of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Table A.25: Estimates by Occupation Formality for Citizens and Non-Citizens Age 18 to 35

Variables	Working	Labor Force	Unemployed	Income	Hours per Week	Worked in Past Year	Self-Employed	School	GED
<b>Panel A: Formal Occupations</b>									
Eligible* After	0.011** [0.005]	0.006 [0.005]	-0.007* [0.003]	-816 [641]	0.064 [0.238]	0.012*** [0.004]	0.000 [0.003]	0.026*** [0.006]	0.008*** [0.002]
Eligible	0.019*** [0.002]	0.012*** [0.002]	-0.009*** [0.002]	314 [220]	0.452*** [0.112]	0.002 [0.002]	0.009*** [0.001]	-0.014*** [0.003]	-0.016*** [0.001]
Observations	2,999,128	2,999,128	2,574,696	2,999,128	2,999,128	2,999,128	2,999,128	2,999,128	2,129,202
R-squared	0.048	0.042	0.030	0.252	0.140	0.018	0.015	0.282	0.115
<b>Panel B: Informal Occupations</b>									
Eligible* After	0.019*** [0.007]	0.004 [0.005]	-0.015*** [0.005]	-135 [325]	0.416* [0.226]	0.013*** [0.005]	0.003 [0.005]	0.022*** [0.007]	0.011** [0.005]
Eligible	0.032*** [0.004]	0.023*** [0.003]	-0.015*** [0.003]	1,066*** [182]	1.538*** [0.125]	0.014*** [0.003]	0.018*** [0.003]	-0.042*** [0.004]	-0.030*** [0.003]
Observations	1,147,770	1,147,770	924,454	1,147,770	1,147,770	1,147,770	1,147,770	1,147,770	824,238
R-squared	0.032	0.032	0.026	0.182	0.116	0.016	0.035	0.365	0.107

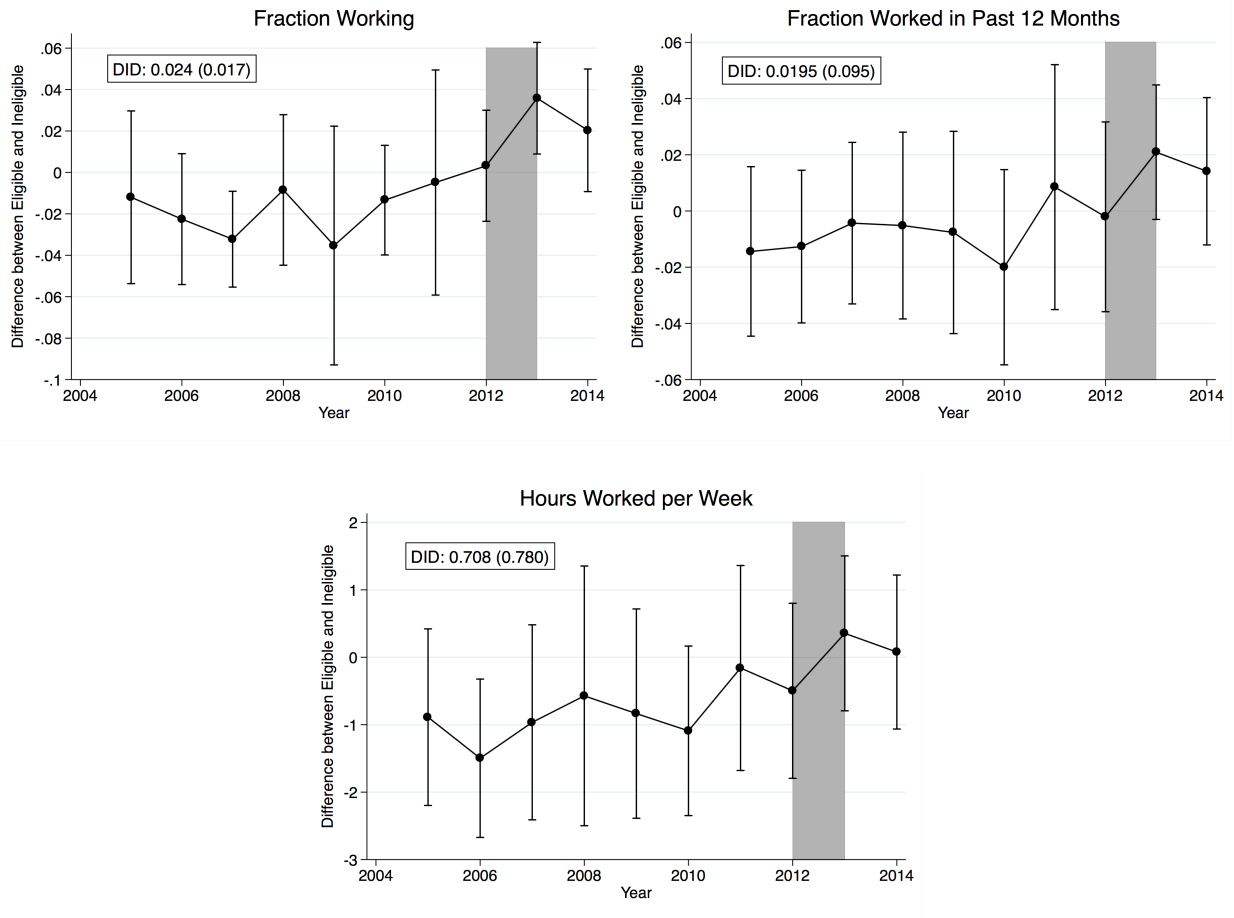
Note: Table A.25 reports the estimates from equation (1) for the subsample of individuals who worked in the last five years in a formal occupation (Panel A) and the subsample of individuals who worked in the last five years in an informal occupation (Panel B). The estimation uses the sample from Panel D of Table 2. Each column indicates the outcome variable of interest. The first row of each panel reports the estimated coefficient on the interaction term and the second row reports the estimated coefficient on the DACA-eligibility variable. Standard errors are clustered at the state-year level. \*\*\* Significant at the 1 percent level. \*\* Significant at the 5 percent level. \* Significant at the 10 percent level.

Figure A.1: Difference in Working by DACA Eligibility for Age Entered the US 12 to 19



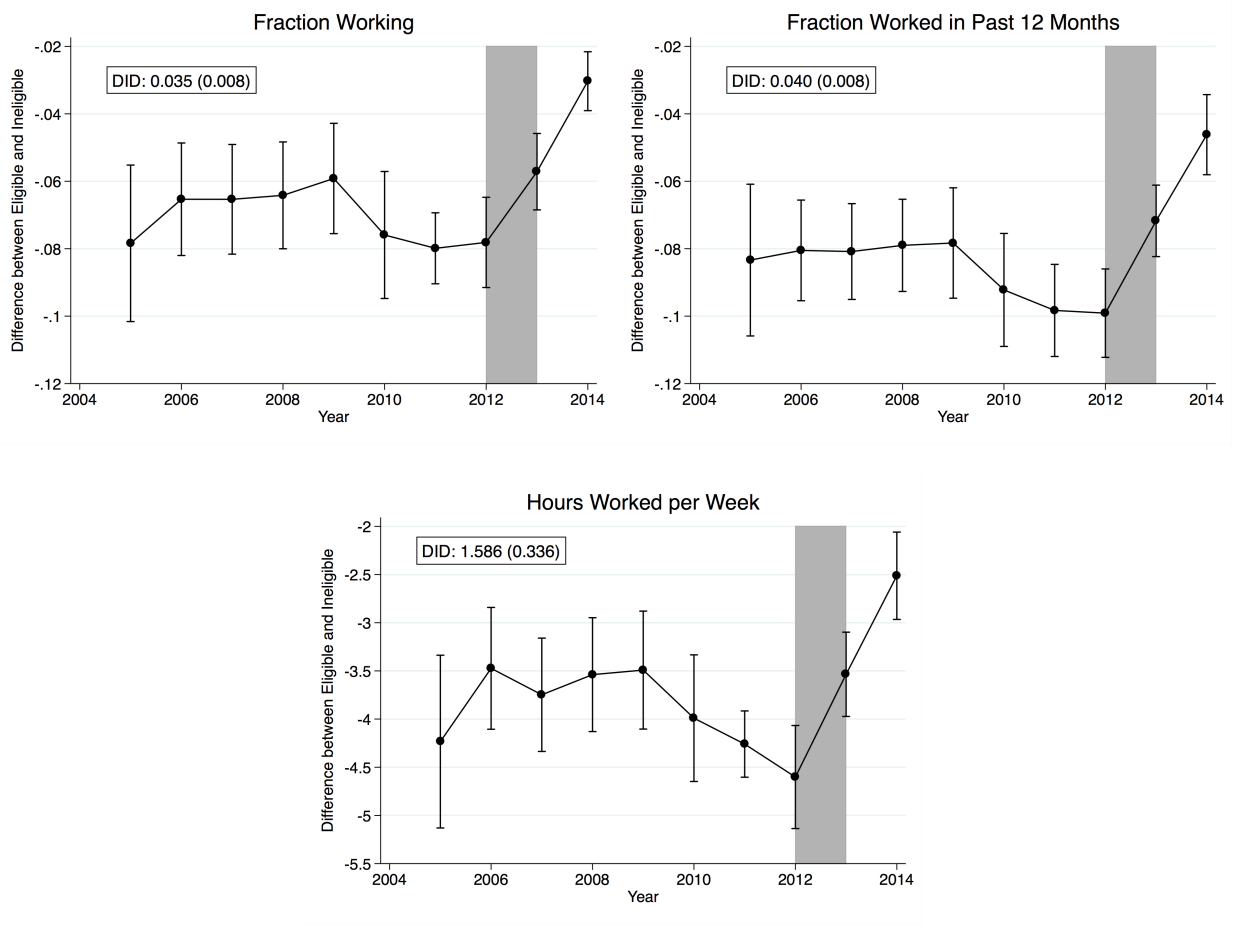
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel A of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.2: Difference in Working by DACA Eligibility for Age 27 to 34



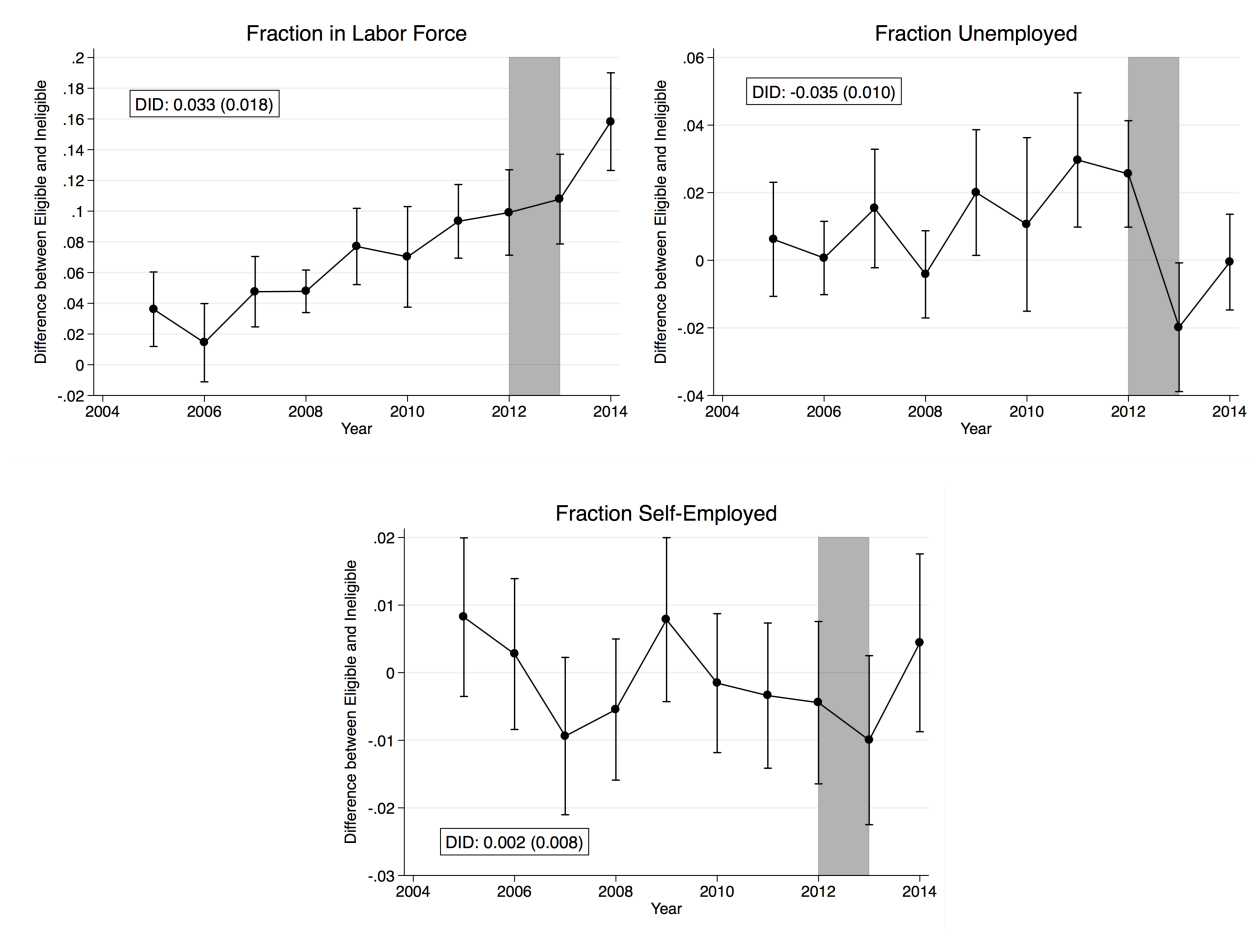
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel B of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.3: Difference in Working by DACA Eligibility for Citizens and Non-citizens



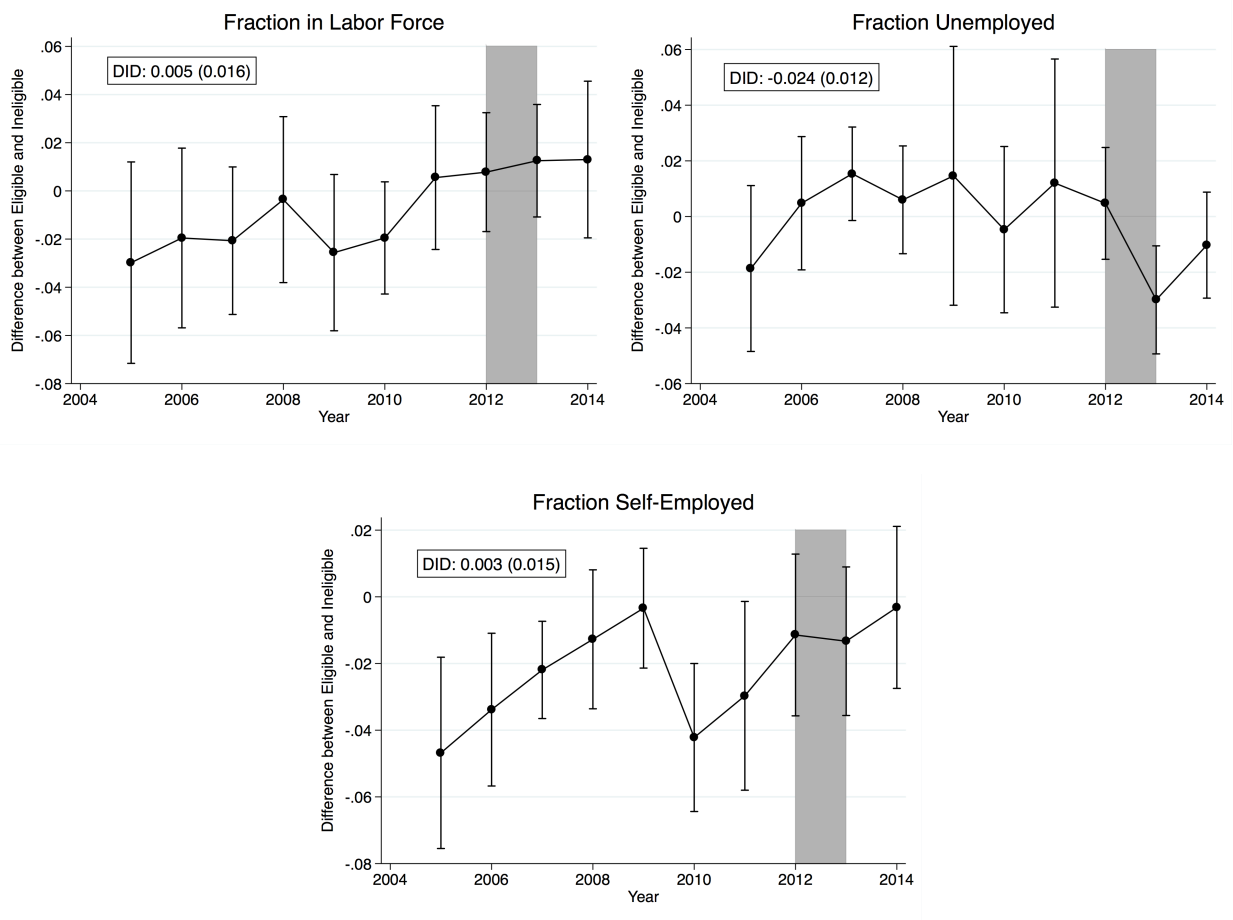
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel D of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.4: Difference in Employment Status by DACA Eligibility for Age Entered the US 12 to 19



Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel A of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

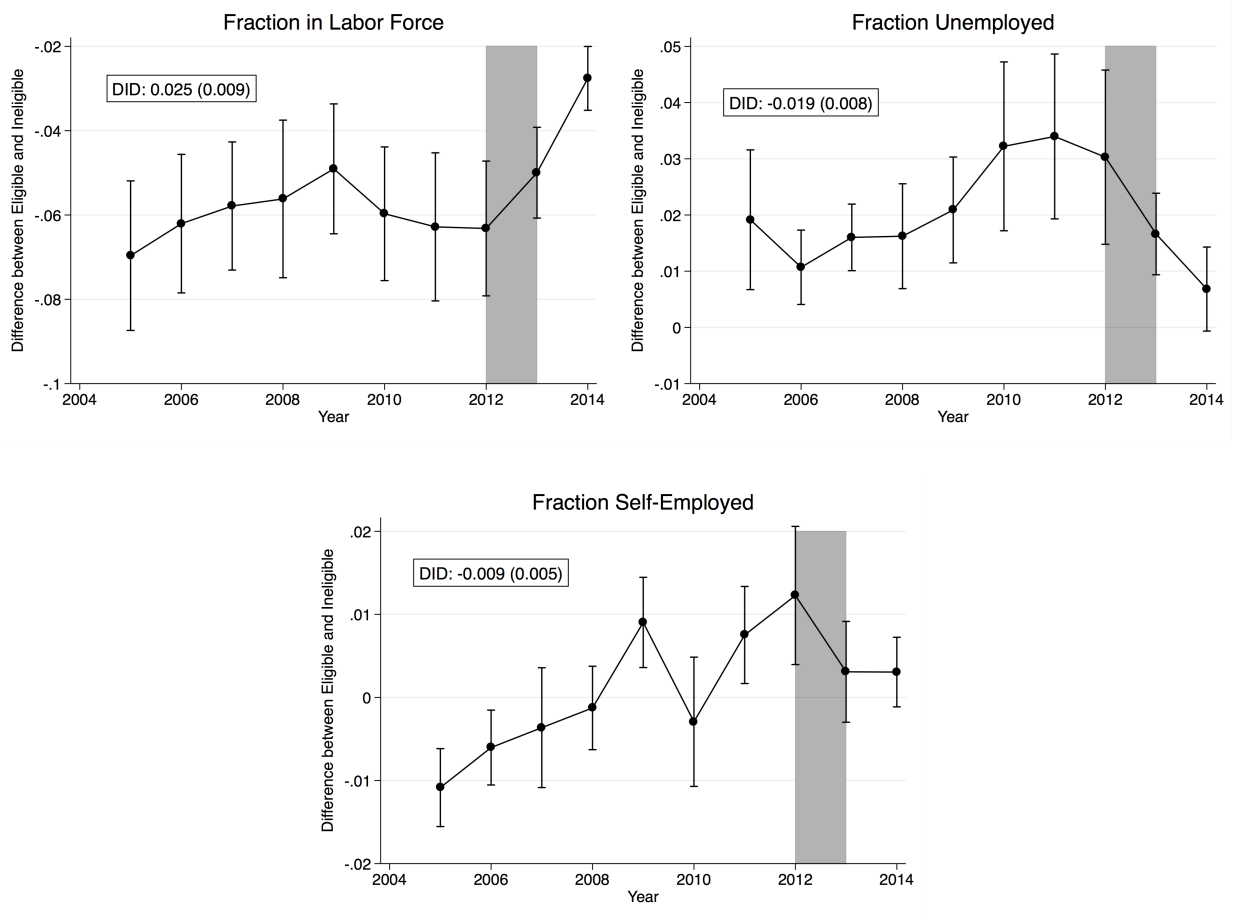
Figure A.5: Difference in Employment Status by DACA Eligibility for Age 27 to 34



Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel B of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

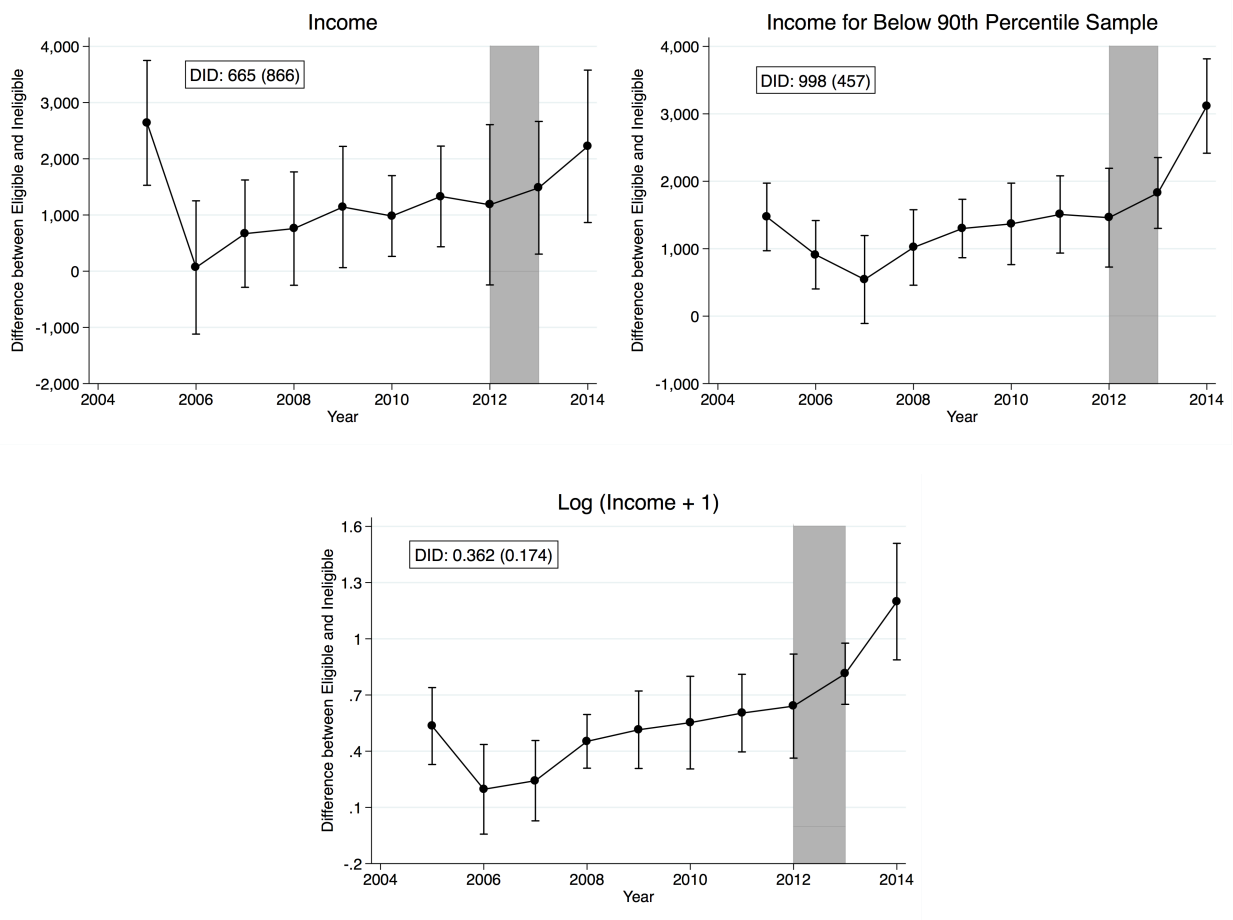


Figure A.6: Difference in Employment Status by DACA Eligibility for Citizens and Non-citizens



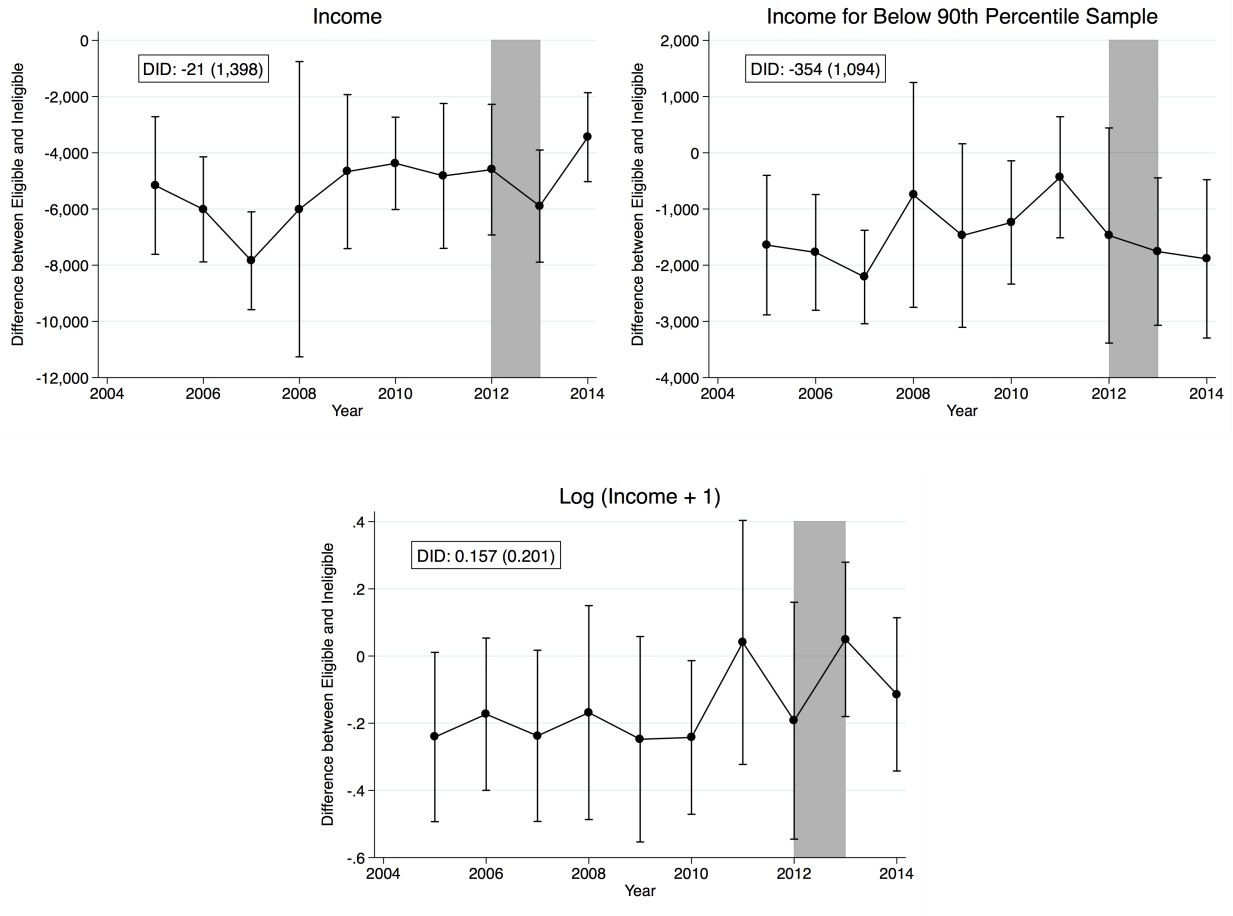
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel D of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.7: Difference in Income by DACA Eligibility for Age Entered the US 12 to 19



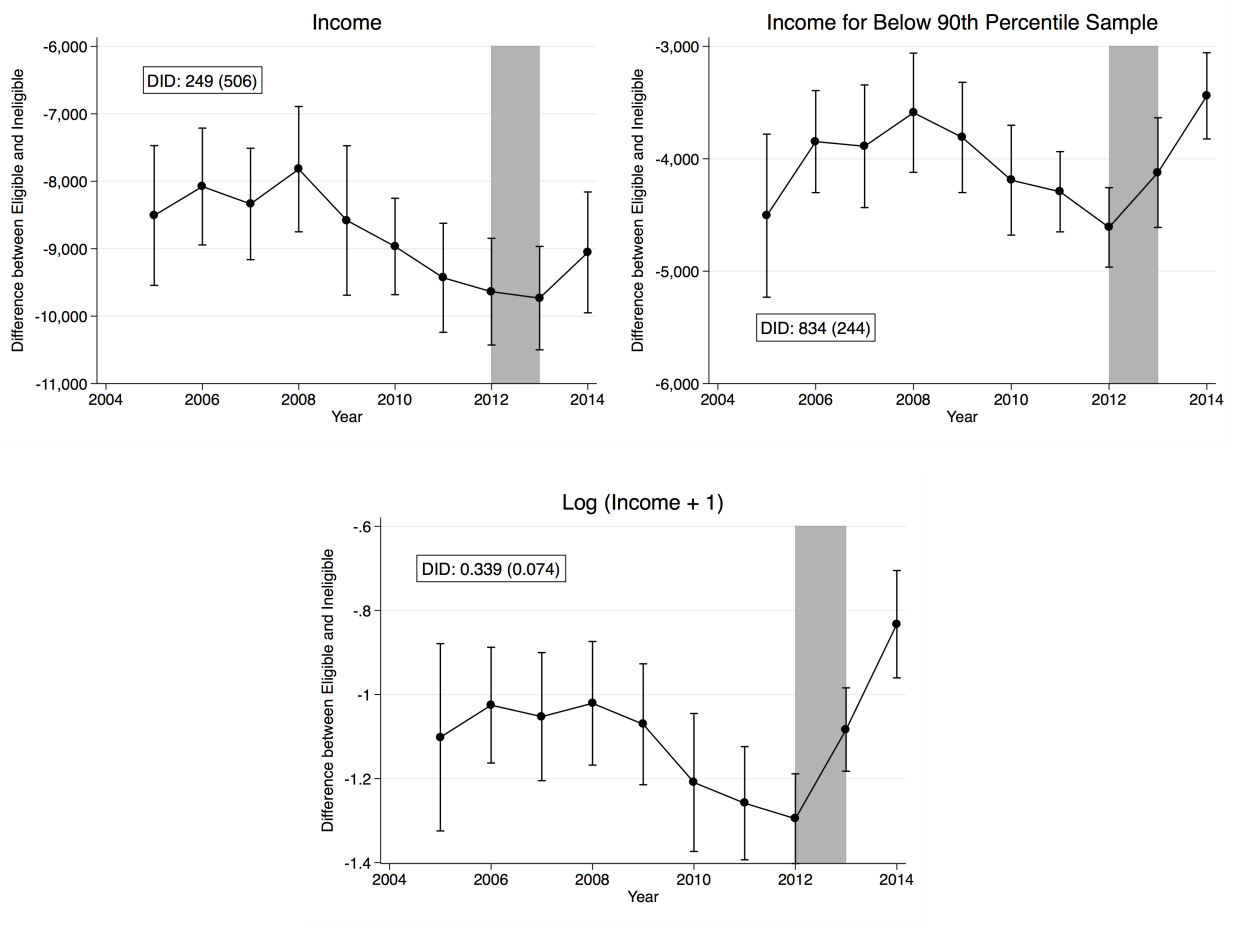
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel A of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.8: Difference in Income by DACA Eligibility for Age 27 to 34



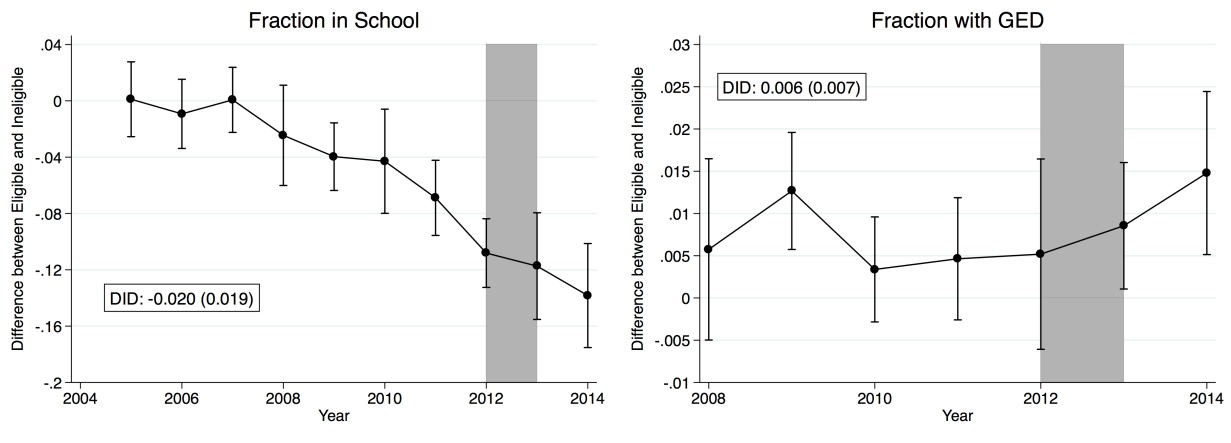
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel B of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.9: Difference in Income by DACA Eligibility for Citizens and Non-citizens



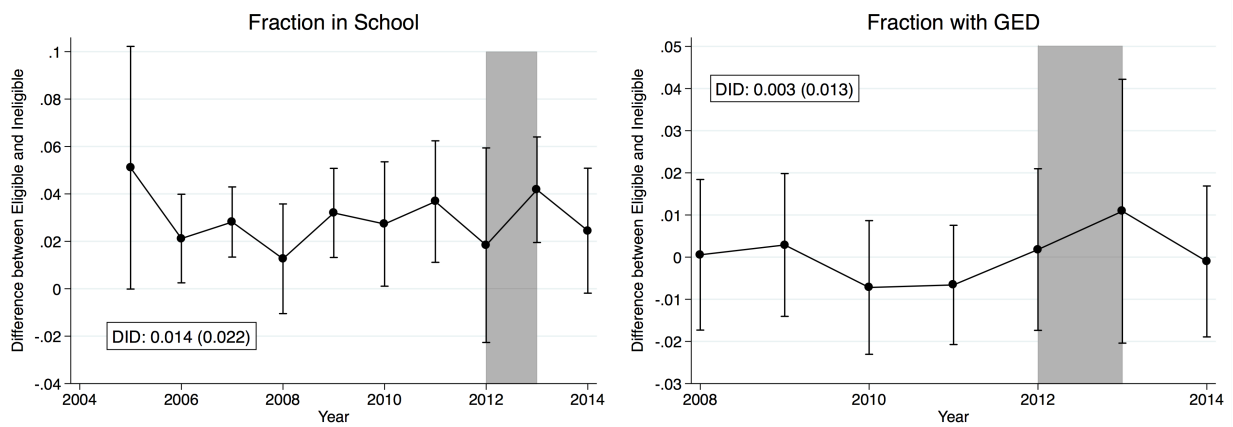
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel D of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.10: Difference in Education Outcomes by DACA Eligibility for Age Entered the US 12 to 19



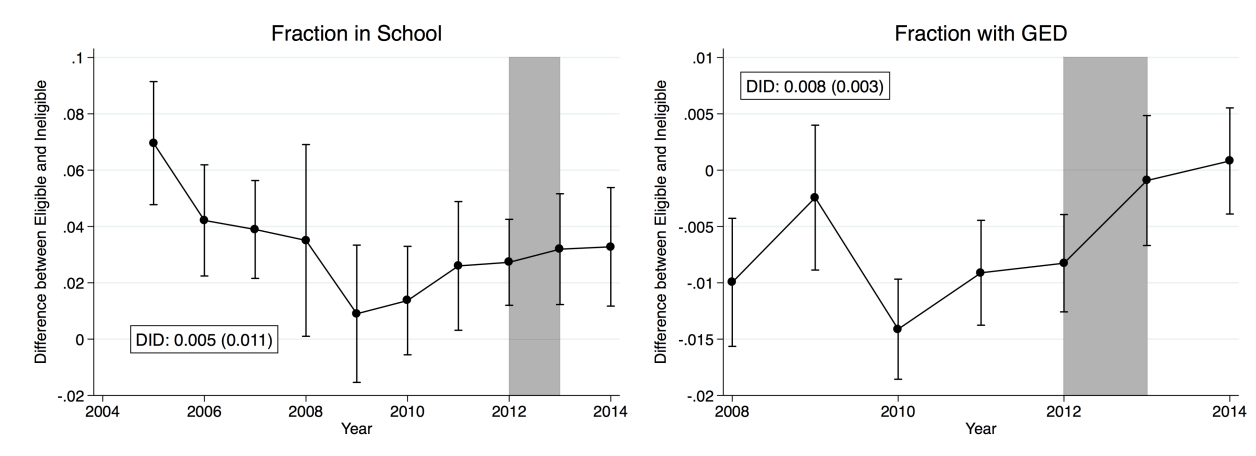
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel A of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.11: Difference in Education Outcomes by DACA Eligibility for Age 27 to 34



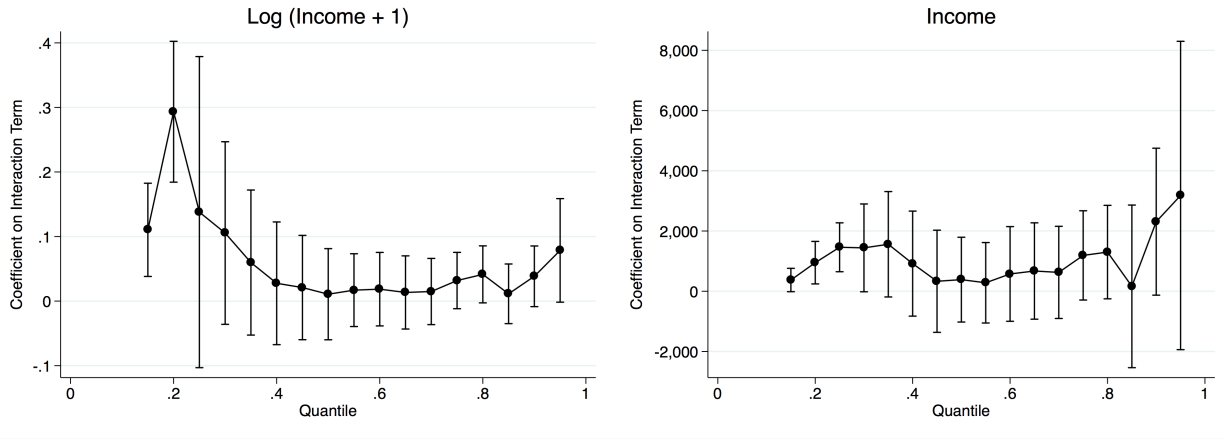
Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel B of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

Figure A.12: Difference in Education Outcomes by DACA Eligibility for Citizens and Non-citizens



Note: Each figure shows the mean difference of the given variable between DACA-eligible and DACA-ineligible individuals for each year from 2005 to 2014. The sample is the same as Panel D of Table 2. The shaded area between 2012 and 2013 represents when DACA became available.

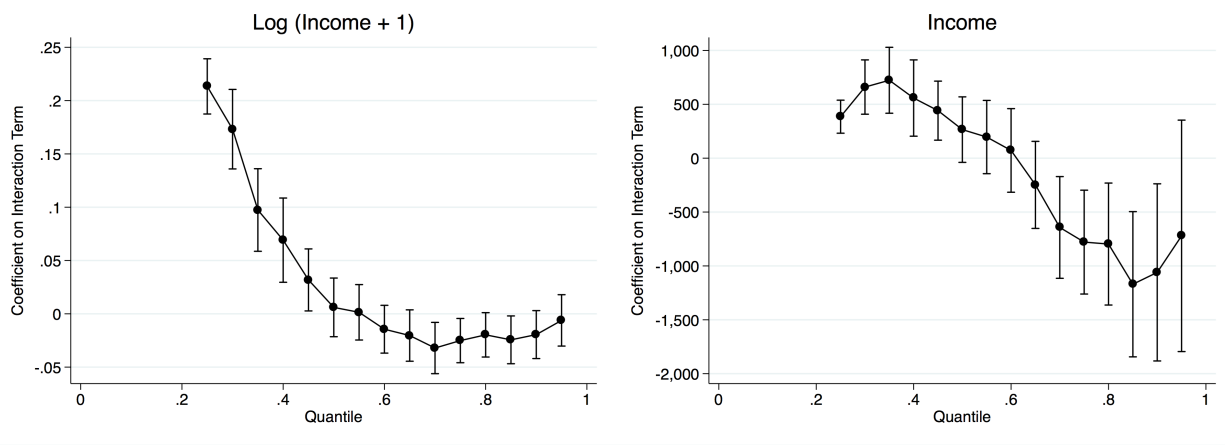
Figure A.13: Effect of DACA on Income by Income Quantile for Age 27 to 34



Note: Each point represents the coefficient on the interaction term between DACA eligibility and the binary variable for after DACA became available when a quantile regression is estimated using the specification from equation (1). No estimates are available prior to the 0.15 quantile because 10 to 15 percent of individuals in the sample have an income of zero. The sample is the same as Panel B of Table 2. The outcome variable for the first graph is  $\log(\text{Income} + 1)$ . The outcome variable for the second graph is income.

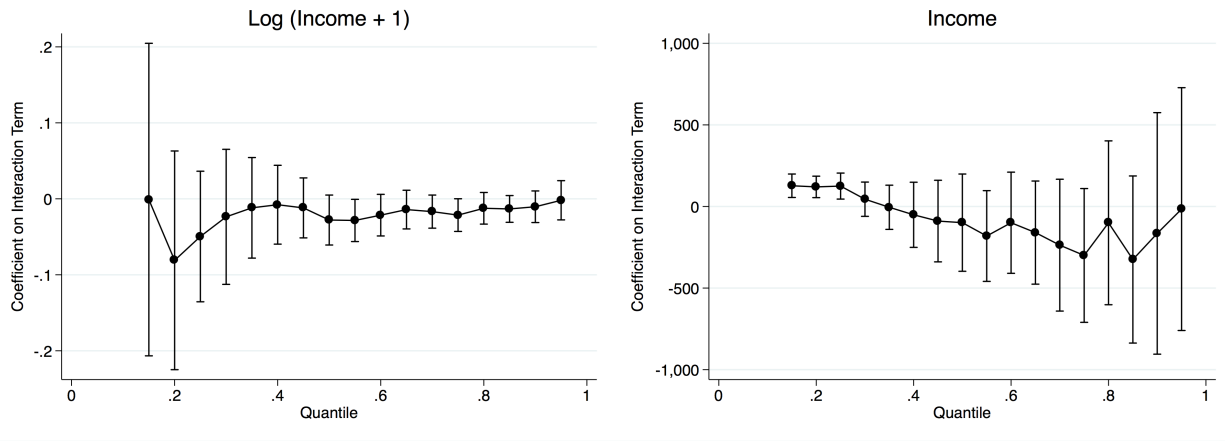


Figure A.14: Effect of DACA on Income by Income Quantile for Non-Citizens Ages 18 to 35



Note: Each point represents the coefficient on the interaction term between DACA eligibility and the binary variable for after DACA became available when a quantile regression is estimated using the specification from equation (1). No estimates are available prior to the 0.25 quantile because 20 to 25 percent of individuals in the sample have an income of zero. The sample is the same as Panel C of Table 2. The outcome variable for the first graph is  $\log(\text{Income} + 1)$ . The outcome variable for the second graph is income.

Figure A.15: Effect of DACA on Income by Income Quantile for Citizens and Non-citizens



Note: Each point represents the coefficient on the interaction term between DACA eligibility and the binary variable for after DACA became available when a quantile regression is estimated using the specification from equation (1). No estimates are available prior to the 0.15 quantile since 10 to 15 percent of individuals in the sample have an income of zero. The sample is a randomly chosen 10 percent sample of that used in Panel D of Table 2 due to computational limitations. The outcome variable for the first graph is  $\log(\text{Income} + 1)$ . The outcome variable for the second graph is income.

# Web Appendix

## 1 Text for ACS Questions

This appendix includes the text for the American Community Survey (ACS) questions used in this paper. The text for all ACS question are available on the United States Census Bureau's website<sup>1</sup> and on the Integrated Public Use Microdata Series' (IPUMS) website.<sup>2</sup>

### 1.1 Outcome Variables

#### Working:

Individuals are considered employed and working by the ACS if they answer yes to either question 29a or 29b on the ACS questionnaire (see Figure 1). Individuals who answer no to both 29a and 29b on the ACS questionnaire are considered to not be working.

Figure 1: Text for Working or Not ACS Question

**29.**

**a) LAST WEEK, did this person work for pay at a job**

- Yes *SKIP to question 30*
- No - Did not work (or retired)

**b) LAST WEEK, did this person do ANY work for pay, even for as little as one hour?**

- Yes
- No --> *SKIP to question 35a*

For more detail, the following description was included in the ACS instruction guide.

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<sup>1</sup><https://www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.html>

<sup>2</sup><https://usa.ipums.org/usa/voliii/tEnumForm.shtml>

Figure 2: ACS Instruction Guide Description for Working or Not

**29a-29b.**

*Count as work - Mark the "Yes" box if this person performed:*

- Work for someone else for wages, salary, piece rate, commission, tips, or payments "in kind" (for example, food or lodging received as payment for work performed).
- Work in own business, professional practice, or farm.
- Any work in a family business or farm, paid or not.
- Any part-time work including babysitting, paper routes, etc.
- Active duty in the Armed Forces.

*Do not count as work - Mark the "No" box if this person performed:*

- Housework or yard work at home.
- Unpaid volunteer work.
- School work done as a student.
- Work done as a resident of an institution.

**Unemployed:**

Individuals are considered unemployed by the ACS if they answer no to both question 29a and 29b on the ACS questionnaire (see Figure 1) and they answer yes to question 36 (see Figure 3).

Figure 3: Text for Labor Force ACS Question

**36. During the LAST 4 WEEKS, has this person been ACTIVELY looking for work?**

Yes

No --> SKIP to question 38

**Labor Force:**

Individuals are considered not in the labor force by the ACS if they answer no to both question 29a and 29b on the ACS questionnaire (see Figure 1) and they answer no to question 36 (see Figure 3). They are considered part of the labor force if they answered yes to either question 29a, 29b, or 36 on the ACS questionnaire.

**Income:**

The income variable used in the paper is a person's total income and is the answer to question 48 (see Figure 4). Note that this measure of income includes all sources of income and is the total amount for the last 12 months.

Figure 4: Text for Income ACS Question

**47. INCOME IN THE PAST 12 MONTHS.**  
*Mark (X) the "Yes" box for each type of income this person received, and give your best estimate of the TOTAL AMOUNT during the PAST 12 MONTHS. (NOTE: The "past 12 months" is the period from today's date one year ago up through today.) Mark (X) the "No" box to show types of income NOT received. If net income was a loss, mark the "Loss" box to the right of the dollar amount. For income received jointly, report the appropriate share for each person -- or, if that's not possible, report the whole amount for only one person and mark the "No" box for the other person.*

**a) Wages, salary, commissions, bonuses, or tips from all jobs.** *Report amount before deductions for taxes, bonds, dues, or other items*

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No

**b) Self-employment income from own nonfarm businesses or farm businesses, including proprietorships and partnerships.**  
*Report NET income after business expenses*

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No  
 Loss

**c) Interest, dividends, net rental income, royalty income, or income from estates and trusts.** *Report even small amounts credited to an account*

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No  
 Loss

**d) Social Security or Railroad Retirement**

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No

**e) Supplemental Security Income (SSI)**

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No

**f) Any public assistance or welfare payments from the state or local welfare office.**

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No

**g) Retirement, survivor, or disability pensions. Do NOT include Social Security.**

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No

**h) Any such other sources of income received regularly such as Veterans' (VA) payments, unemployment compensation, child support or alimony.**  
*Do NOT include lump sum payments such as money from an inheritance or the sale of a home*

Yes --> \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 No

**48. What was this person's total income during the PAST 12 MONTHS?**  
*Add entries in questions 47a to 47h; subtract any losses. If net income was a loss, enter the amount and mark (X) the "Loss" box next to the dollar amount.*

None OR \$ \_\_\_\_\_ .00 (TOTAL AMOUNT for past 12 MONTHS)  
 Loss

### Hours per Week:

Figure 5 shows the text for the ACS question used to determine the usual number of hours a person worked per week.

Figure 5: Text for Hours per Week ACS Question

**40. During the PAST 12 MONTHS (52 weeks), in the WEEKS WORKED, how many hours did this person usually work each WEEK?**

Usual hours worked each WEEK

[ ] [ ] [ ]

### Worked in Past Year:

Figure 6 shows the text for the ACS question used to determine whether a person worked in the last year.

Figure 6: Text for Worked in the Past Year ACS Question

**38. When did this person last work, even for a few days?**

[ ] Within the past 12 months

[ ] 1 to 5 years ago ->SKIP to [L]

[ ] Over 5 years ago or never worked ->SKIP to question 47

### Self Employed:

Figure 7 shows the text for the ACS question used to determine whether a person was self employed. The ACS considers a person self employed if in response to question 41 (see Figure 7) they mark either “SELF-EMPLOYED in own NOT INCORPORATED business, professional practice, or farm?” or “SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm?”.

Figure 7: Text for Self Employed ACS Question

**41. Was this person...** *Mark (X) ONE box*

- an employee of a PRIVATE FOR PROFIT company or business, or of an individual, for wages, salary, or commissions?
- an employee of a PRIVATE NOT FOR PROFIT, tax-exempt, or charitable organization?
- a local GOVERNMENT employee (city, county, etc.)?
- a state GOVERNMENT employee?
- a Federal GOVERNMENT employee?
- SELF-EMPLOYED in own NOT INCORPORATED business, professional practice, or farm?
- SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm?
- working WITHOUT PAY in family business or farm?

**School:**

Figure 8 shows the text for the ACS question used to determine whether a person is in school.

Figure 8: Text for School ACS Question

**10.**

**a) At any time IN THE LAST 3 MONTHS, has this person attended school or college?** *Include only nursery or preschool, kindergarten, elementary school, home school, and schooling which leads to a high school diploma or a college degree.*

- No, has not attended in the last 3 months ->*SKIP to question 11*
- Yes, public school, public college
- Yes, private school, private college, home school

**GED:**

Figure 9 shows the text for the ACS question used to determine whether an individual has a GED. Individuals who respond to question 11 (see Figure 9) by marking “GED or alternative credential COLLEGE OR SOME COLLEGE” are considered to have a GED.

Figure 9: Text for GED ACS Question

**11. What is the highest degree or level of school this person has COMPLETED?** Mark (X) ONE box.  
If currently enrolled, mark the previous grade or highest degree received.

NO SCHOOLING COMPLETED

No schooling completed

NURSERY OR PRESCHOOL THROUGH GRADE 12

Nursery school

Kindergarten

Grade 1 through 11 -- Specify grade 1-11 --> [ ][ ]

12th grade -- **NO DIPLOMA**

HIGH SCHOOL GRADUATE

Regular high school diploma

GED or alternative credential COLLEGE OR SOME COLLEGE

Some college credit, but less than 1 year of college credit

1 or more years of college credit, no degree

Associate's degree (for example: AA, AS)

Bachelor's degree (for example: BA, BS)

AFTER BACHELOR'S DEGREE

Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)

Professional degree beyond a bachelor's degree (for example: MD, DDS, DVM, LLB, JD)

Doctorate degree (for example: PhD, EdD)

## 1.2 Independent Variables

### Citizen:

Figure 10 shows the text for the ACS question used to determine whether a person is a United States citizen.



Figure 10: Text for Citizen ACS Question

**8. Is this person a citizen of the United States?**

- Yes, born in the United States -> *SKIP to 10a*
- Yes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas
- Yes, born abroad of U.S. citizen parent or parents
- Yes, U.S. citizen by naturalization --> *Print year of naturalization* --> [ ][ ][ ]
- No, not a U.S. citizen

**Years in US:**

Figure 11 shows the text for the ACS question used to determine how long a person has been in the United States.

Figure 11: Text for Years in US ACS Question

**9. When did this person come to live in the United States?**

*Print numbers in boxes.*

Year [ ][ ][ ]

**Age:**

Figure 12 shows the text for the ACS question used to determine the age of a person.

Figure 12: Text for Age ACS Question

**4. What is Person X's age and what is Person X's date of birth?** *Please report babies as age 0 when the child is less than 1 year old.*

*Print numbers in boxes.*

Age (in years)

[ ][ ][ ]

Month

[ ][ ]

Day

[ ][ ]

Year of birth

[ ][ ][ ][ ]

**Gender:**

Figure 13 shows the text for the ACS question used to determine the gender of a person.

Figure 13: Text for Gender ACS Question

**3. What is Person X's sex? Mark (X) ONE box.**

- Male
- Female

**Race:**

Figure 14 shows the text for the ACS question used to determine the race of a person.

Figure 14: Text for Race ACS Question

**6. What is Person X's race? Mark (X) one or more boxes.**

- White
- Black or African Am.
- American Indian or Alaska Native -- Print name of enrolled or principal tribe. -->  
\_\_\_\_\_
- Asian Indian
- Japanese
- Chinese
- Korean
- Filipino
- Vietnamese
- Other Asian -- Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on. \_\_\_\_\_
- Native Hawaiian
- Guamanian or Chamorro
- Samoan
- Other Pacific Islander -- Print race, for example, Fijian, Tongan, and so on.
- Some other race -- Print race. --> \_\_\_\_\_

**Ethnicity:**

Figure 15 shows the text for the ACS question used to determine the ethnicity of a person.

Figure 15: Text for Ethnicity ACS Question

**5. Is Person X of Hispanic, Latino, or Spanish origin?**

- No**, not of Hispanic, Latino, or Spanish origin
  - Yes, Mexican, Mexican Am., Chicano
  - Yes, Puerto Rican
  - Yes, Cuban
  - Yes, another Hispanic, Latino, or Spanish origin -- *Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.* --
- 

**Home Language:**

Figure 16 shows the text for the ACS question used to determine whether a person spoke a language other than English at home.

Figure 16: Text for Home Language ACS Question

**14.**

**a) Does this person speak a language other than English at home?**

- Yes
- No -> *SKIP to question 15a*

**b) What is this language?**

---

*For example: Korean, Italian, Spanish, Vietnamese*

**Place of Birth:**

Figure 17 shows the text for the ACS question used to determine where a person was born.

Figure 17: Text for Place of Birth ACS Question

**7. Where was this person born?**

- In the United States - *Print name of state.*\_\_\_\_\_
- Outside the United States - *Print name of foreign country, or Puerto Rico, Guam, etc.*\_\_\_\_\_

## Married:

Figure 18 shows the text for the ACS question used to determine whether a person is married.

Figure 18: Text for Marital Status ACS Question

### **20. What is this person's marital status?**

- Now married
- Widowed
- Divorced
- Separated
- Never married --> *SKIP to I*

## Education Level:

Figure 19 shows the text for the ACS question used to determine a person's education level.

Figure 19: Text for Education Level ACS Question

**11. What is the highest degree or level of school this person has COMPLETED?** *Mark (X) ONE box. If currently enrolled, mark the previous grade or highest degree received.*

#### NO SCHOOLING COMPLETED

- No schooling completed

#### NURSERY OR PRESCHOOL THROUGH GRADE 12

- Nursery school
- Kindergarten
- Grade 1 through 11 -- *Specify grade 1-11* --> [ ][ ]
- 12th grade -- **NO DIPLOMA**

#### HIGH SCHOOL GRADUATE

- Regular high school diploma
- GED or alternative credential COLLEGE OR SOME COLLEGE
- Some college credit, but less than 1 year of college credit
- 1 or more years of college credit, no degree
- Associate's degree (*for example: AA, AS*)
- Bachelor's degree (*for example: BA, BS*)

#### AFTER BACHELOR'S DEGREE

- Master's degree (*for example: MA, MS, MEng, MEd, MSW, MBA*)
- Professional degree beyond a bachelor's degree (*for example: MD, DDS, DVM, LLB, JD*)
- Doctorate degree (*for example: PhD, EdD*)