Did DACA Harm US-Born Workers? Temporary Work Visas and Labor Market Competition*

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August 21, 2020

Abstract

Deferred Action for Childhood Arrivals granted more than 900,000 temporary work permits to eligible immigrants. I estimate the impact of the policy on the labor market outcomes of natives and immigrants ineligible to take up the policy using ACS data and a continuous difference-in-differences strategy to compare individuals who are more and less exposed to the eligible population. I find that DACA does not depress labor market outcomes for natives, and possibly increases the fraction working. I also find that the policy likely had no impact on ineligible immigrants.

*I am grateful to Leah Boustan for much guidance and support throughout this project. I am also grateful to Jiwon Choi, Faizaan Kisat, Ilyana Kuziemko, Victoria Larsen, David Lee, Alex Mas, Owen Zidar, and participants of the Princeton Industrial Relations Section Labor Lunch for helpful comments and suggestions.

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Immigration reform has been a key issue in American politics for decades. In 2012, President Barack Obama announced DACA (Deferred Action for Childhood Arrivals), which granted temporary relief from deportation and provided renewable two-year work permits to undocumented immigrants who arrived as children and met additional criteria.

In a letter to President Obama following the announcement of the program, Republican lawmakers expressed concern over granting undocumented immigrants work authorization during an economic downturn. The lawmakers were concerned the policy would increase the competition for native workers struggling to find employment. Undocumented youth and the DACA policy itself continue to be at the center of recent immigration debates. It is thus important to understand the ramifications of the policy on all potentially affected individuals.

This paper considers the impact of DACA on local labor markets. When a pool of undocumented immigrants is able to obtain legal work, natives and other workers in the area may be impacted by the influx of newly eligible workers. The scope of the policy could plausibly have an impact on natives and other workers: in the program's history, more than 900,000 applicants have been approved, and granted relief from deportation and a temporary work permit.[1] These applications have been dispersed throughout the United States, with some local economies seeing many applicants, like in Texas and California, and some seeing very few, like in Maine and Vermont. Thus some regions experience greater levels of undocumented immigrants receiving work permits than others. This paper will leverage the regional variation in exposure to study the impact of the policy on natives.

As with immigrants in general, DACA-eligible immigrants tend to concentrate in urban areas, with more than 90% of the the DACA-eligible population residing in an urban area. The DACA policy will then be particularly important and the labor market implications especially relevant for urban regions. Natives residing within cities have a labor market comprised of 1% DACA-eligible immigrants, compared to less than 0.3% for natives outside

[1] See U.S. Citizenship and Immigration Services.

of metropolitan areas. Individuals residing in urban areas will therefore be more greatly exposed to potential labor market effects of granting this group of immigrants work permits and relief from deportation. In addition, DACA recipients pay $566.9 million in mortgage payments, $2.3 billion in rental payments, and their households pay $3.1 billion in state and local taxes each year.[2] The economic contributions of DACA-eligible immigrants will be greatest in urban areas.

Prior studies have focused on the child arrivals themselves, investigating the impact of the program on various outcomes, including educational attainment, the labor market, and health. This strand of literature finds the policy increased labor force participation of the eligible population, but is split on the impact of the policy on human capital investment decisions. Pope (2016) finds that DACA draws eligible individuals into the labor force and decreases their unemployment rate. Amuedo-Dorantes and Antman (2017) find suggestive evidence that lack of authorization leads individuals to enroll in school when working is not a viable option. Kuka et al. (2018) find that DACA led to greater high school attainment and college attendance for some DACA-eligible immigrants. On the other hand, Hsin and Ortega (2018) find that temporary nature of the program creates barriers to educational investments. With regard to health outcomes, Hainmueller et al. (2017) find that DACA led to improved mental health outcomes for the children of DACA-eligible mothers.

DACA could impact the broader labor market in a number of ways. In a standard labor supply model, DACA could generate competition and decrease wages for natives and ineligible immigrants. It may also be the case that employment increases due to complementarities between natives and immigrants, increased productivity, or specialization, as some studies have found in the literature on the effects of immigrants more broadly. The DACA policy may allow eligible immigrants to shift into better matched occupations that requires licensing, thus increasing competition for some natives and decreasing competition for others. As the direction of the impact is ambiguous, I study the question empirically.

[2]See https://www.americanprogress.org/issues/immigration/news/2020/04/30/484225/know-daca-recipients-metropolitan-area-2/

In order to investigate the impact of the policy on populations other than the eligible group, I use American Community Survey (ACS) data. From the DACA eligibility requirements that are observable in the data, I impute an estimate of DACA eligibility. I then calculate the share of a region's population that is comprised of DACA-eligible immigrants. Regions with a higher share of DACA-eligible individuals will be more exposed to the policy. I consider robustness to my exposure measure by scaling it to account for heterogeneity in policy uptake by state of residence and country of birth.

Using the variation in exposure to DACA-eligible immigrants across regions, I employ a difference-in-differences with continuous treatment design to investigate the impact of the policy on labor market outcomes of native males and DACA-ineligible male immigrants. Thus, the difference-in-differences framework compares individuals in regions more and less exposed to the eligible population.

The results suggest DACA did not harm the labor market outcomes of native born workers. There is suggestive evidence that the policy had a positive impact on the fraction of natives working. The largest estimates suggest increasing a local area's DACA-eligible population by 3 individuals is associated with an increase of 1 native working. This increase in the fraction of natives working stems from drawing individuals out of unemployment and from individuals entering the labor force.

The results for DACA-ineligible immigrants are more imprecisely estimated, but suggest no negative impact of the policy. In fact, the estimates suggest smaller labor market impacts for DACA-ineligible immigrants. The largest estimates suggest increasing a local area's DACA-eligible population by approximately 50 individuals is associated with an increase of 1 additional DACA-ineligible working. As with natives, there is some evidence this is due to drawing individuals out of unemployment. However, the overall results indicate there was no discernible impact on the labor market outcomes for DACA-ineligible immigrants.

Through the eligibility requirements, DACA targeted young immigrants with at least a high school degree. It is possible that the group selected by the policy impacted certain

types of natives or DACA-ineligible immigrants differently. To assess this possibility, I look at heterogeneity in labor market effects by age and skill. The results suggest that young, low-skilled natives may be driving the overall results for natives. In addition, no group of DACA-ineligible immigrants is particularly impacted by the policy. In additional results in the Appendix, I investigate the impact of the policy by race. These findings suggest white males are driving the results for natives.

This paper is related to the literature focusing on the impact of immigration on native labor market outcomes (for example, Card (1990), Card (2001), Borjas (2003), and Clemens et al. (2018)). One key difference between this strand of literature and my paper is this literature has largely studied the influx of *new* immigrants. An important aspect of the DACA policy is that the DACA immigrants, by the eligibility restrictions, have resided within the United States for a minimum of five years. Therefore, the eligible population has already been participating in the United States economy for some time and may generate a different impact on natives than studied in this strand of literature.

Some studies focus on possible economy-wide impacts of changing legal status. Ortega et al. (2018) develop a general equilibrium model to determine the effect of DACA and the Dream Act, finding that both programs increase GDP, with larger effects coming from the Dream Act. Ortega and Hsin (2018) investigate the reduction in productivity associated with undocumented status and conclude that occupational barriers lead to misallocations and negatively affect economic growth.

This paper also relates to papers studying the impact of the Immigration Reform and Control Act of 1986, a policy that granted large scale legalization to immigrants that arrived prior to 1982. Several studies in this strand of literature focus on the labor market outcomes of the legalized and other immigrants (Amuedo-Dorantes et al. (2007), Amuedo-Dorantes and Bansak (2011), Davila et al. (1998), Kossoudji and Cobb-Clark (2002), Pan (2012), and Rivera-Batiz (1999)). Other studies focus on alternative outcomes, such as human capital attainment and crime (Baker (2015) and Cortes (2013)). Outside of the United States,

several papers have investigated labor market outcomes from various amnesty and refugee programs in Europe (for example, Devillanova et al. (2018), Elias et al. (2018), and Fasani et al. (2018)).

The paper proceeds as follows. In Section 1, I provide a brief summary on the history of DACA. In Section 2, I discuss my data sources, including the imputation of DACA status and a preview of the data. In Section 3, I discuss my empirical strategy. Section 4 discusses the main findings and Section 5 concludes.

1 History of DACA

DACA was implemented in 2012 under the Obama administration. For more than a decade prior, attempts to provide a path to citizenship for undocumented childhood immigrants were put forth in Congress. The Dream Act was introduced in 2001 and proposed a pathway to permanent citizenship for childhood arrivals. The Dream Act would first provide conditional status upon meeting certain requirements. To receive permanent resident status, individuals would need to graduate from a community college, complete two years toward a four-year degree, or serve for two years in the United States' military within 6 years. The Dream Act was re-introduced in Congress several times after its initial debut, but failed to pass each time.

Unable to come to a legislative solution within Congress, President Obama signed DACA by Executive Order in June 2012, with the policy beginning in August. DACA allows eligible individuals to receive a renewable two-year period of deferred action from deportation. In addition, individuals granted DACA status are eligible for a work permit.

DACA applicants must meet a set of requirements to be eligible. Eligibility for DACA is similar to eligibility for the Dream Act, but does not include a pathway to citizenship. The eligibility criteria center around age and immigration, education, and public safety requirements. In terms of age and immigration requirements, individuals must have no

legal status as of June 2012 (i.e. must be undocumented) and must be physically present in the United States. In addition, individuals must: (i) be under 31 as of June 15, 2012, (ii) have entered the United States before age 16, (iii) have been residing in the United States continuously since June 15, 2007, and (iv) be at least 15 years old at the time of application. The education requirements state that applicants must be currently in school, have graduated high school, have obtained a GED, or have been honorably discharged from the armed forces. Finally, public safety requirements state that individuals may not have been convicted of a felony, serious misdemeanor, three or more other misdemeanors, or pose a threat to national security or public safety.

Following President Obama's announcement of the program in June 2012, the Department of Homeland Security was ordered to begin accepting applications in August 2012. Individuals were required to fill out multiple forms, pay a processing fee, and submit evidence that the eligibility requirements were satisfied. This generated an application processing time of 4-6 months, leading to the earliest applications being accepted at the end of 2012 (Pope (2016)). According to U.S. Citizenship and Immigration Services (USCIS), more than 900,000 initial applications have been received as of May 2018, with approximately half occurring in the program's first year.

The Trump administration ended the program in September 2017, leading to a series of discussions and court cases within both the legislative and judicial branches of the United States' government. The Supreme Court ruled on the case in June 2020, noting that the manner in which the Trump administration rescinded the program was illegal. As of this writing, federal courts in New York have sued the administration for failing to process new applications following the Supreme Court ruling.

2 Data

2.1 Description of Data Source

I use data from IPUMS ACS for the period 2005 through 2018 to examine the labor market outcomes of natives and other immigrants (Ruggles et al. (2020)). This data set is well suited for my analysis. First, the large survey size creates a representative sample. The ACS is a yearly survey that collects demographic and employment information for a 1-percent representative sample of the United States' population. Second, ACS collects information on households living in the United States, regardless of legal status. The sampling procedures, which draws from the universe of addresses, will be representative of the entire population, including undocumented immigrants. In addition, various outreach efforts encourage responses among this population (Kuka et al. (2018)).

The ACS provides detailed information on demographics, education, employment and income. The questions asked in the ACS provide enough detail to identify individuals that meet the age, immigration, and education requirements for obtaining DACA status. As my focus is not on the impact on the DACA-eligibles themselves, I utilize the DACA eligibility criterion to develop the degree of exposure to DACA-eligible immigrants faced by individuals in each region. I then focus the main analysis on native (non-immigrant citizen) adult males aged 18-65. In addition, I also investigate impacts on DACA-ineligible immigrants (non-citizen immigrants who are ineligible to receive DACA) males aged 18-65.

2.2 Identifying DACA Eligibility from the Data

I apply the DACA eligibility requirements outlined in Section 1 to identify likely DACA recipients from the data. In particular, I identify foreign-born non-citizens who arrived by 2007 and by age 16, and who are between the ages of 18 and 30 as of 2012.[3] An observation

[3]The DACA eligibility guidelines state an individual must be 15 to 30. I restrict this group further to individuals aged 18 to 30 as individuals under 18 are unlikely to impact labor market outcomes in a meaningful way.

who meets the above restrictions and is currently enrolled in school or possesses a high school diploma or GED will be identified as eligible for DACA.

Specifically, I can easily observe foreign-born status in the ACS, as respondents answer about birthplace. More difficult is accurately identifying undocumented status, as immigration legality is not directly asked in the survey. I therefore proxy for undocumented status as foreign-born individuals without citizenship status. The number of undocumented individuals in the sample is therefore an overestimate, as individuals with green cards and other temporary visas would be captured in this measure.

Using year of immigration, I can identify if individuals arrived by 2007. In addition, using year of immigration and year of birth, I can calculate age of arrival to determine if arrival was prior to age 16. Using year of birth and quarter of birth, I can determine if an individual was 30 or younger as of June 30, 2012. Finally, I can use enrollment status, educational attainment, and veteran status to determine if one of these requirements is met. Combining these requirements gives the sample of DACA-eligible immigrants, which will be used to determine natives' and DACA-ineligible immigrants' exposure to the policy.

As of January 2018, the program had a participation rate of 52% of the eligible population. Program participation of the eligible population varied both by country of birth and by state of residence. In order to more accurately reflect the exposure of an individual to a DACA recipient, I utilize data from Migration Policy Institute on program participation rates for various countries of birth and states of residence.[4] The program participation rate of applications by birth country is shown in Table 1. Of the immediately eligible population from Mexico, 65% are DACA permit holders. On the other hand, of the immediately eligible population from China or Thailand, only 3% are DACA permit holders. As an alternative measure of DACA exposure, I scale each individual identified as eligible in the data by the participation rate of that country. This measure captures the idea that while I may identify DACA-eligible immigrants with birthplaces across the globe, an observation with

[4]https://www.migrationpolicy.org/programs/data-hub/deferred-action-childhood-arrivals-daca-profiles (Accessed July 2018).

a birthplace of Mexico or Central America is much more likely to have applied for DACA status than an observation with a birthplace from China or Thailand.

In addition, program participation rates of the eligible population varied across the United States as well. The top and bottom states based on participation rates are shown in Table 2. While geographically more than 40% of applications received by USCIS are from Texas and California,[5] Table 2 shows that these two states are not in the top 10 in terms of participation rates of the eligible populations residing in those states. Thus an eligible individual in the data from Texas or California (with participation rates of 61% and 51% respectively) are less likely to have actually obtained DACA status than an individual from Indiana (with a participation rate of 80%). Similarly to the birthplace adjusted measure, I scale each individual identified as eligible in the data by the participation rate of their state of residence.

2.3 Characterization of the DACA-eligible Population

The DACA-eligible population is mostly young, long-term immigrant residents with a high school degree or some college. Table 3 provides summary statistics for DACA-eligible immigrants, DACA-ineligible immigrants, and natives. First, as would be expected, DACA-eligible immigrants are much younger on average than the overall population. By the eligibility requirements of the policy, DACA-eligible immigrants could be no older than 30 as of 2012. For this reason, the average age of a DACA-eligible individual in my sample is just under 24 years old, while the average age in the sample of DACA-ineligible immigrants is almost 39 years old and natives is just over 40 years old. Given the age of DACA recipients relative to the entire population, it is useful to look at similarly-aged natives to get a more accurate picture at which groups the DACA-eligible immigrants are likely to affect. The summary statistics for this comparable aged set of natives is seen in the final column.

Other than age (and marital status), the remaining demographic characteristics of a

[5]See U.S. Citizenship and Immigration Services. Of 908,258 initial applications approved, 246,429 come from California and 142,773 come from Texas.

DACA-eligible immigrant seems to closely mirror the demographic characteristics of DACA-ineligible immigrants. In general, DACA-eligible immigrants are mostly Hispanic and have a home language of Spanish. Looking at immigration characteristics, DACA-eligible immigrants arrived young (around 8.5 years old) and have been in the United States for an extended period of time (about 15 years). In comparison, the DACA-ineligible immigrants arrived at an older age and have been residing in the United States for a shorter period of time.

In order to get an idea of the skill level of a DACA-eligible immigrant, and therefore the type of individuals that may see an increase in competition, I provide summary statistics on the various groups in Table 3. The majority of DACA-eligible immigrants have a high school degree or some college, but have much lower levels of college degree attainment compared to the remaining groups, even relative to similarly aged natives. Given the average education distribution of the DACA-eligible population (high school degree or some college, but not college completion), I may expect differential labor market outcomes for more young, low-skilled natives, who may be more similar in terms of age and education levels (and hence face different levels of competition from DACA-eligible immigrants).

Various labor market outcomes are presented at the end of Table 3. There are not stark differences in the fraction working, unemployed, or in the labor force across groups, but DACA-eligible immigrants have the lowest fraction working, the highest unemployment, and the lowest labor force participation. Their total income is much smaller than all other groups.

To additionally address who might be most impacted by the policy, I investigate which industries are most typical of DACA-eligible immigrants both before and after the policy and relate this to the share of natives in the same industry. The results are in Table 4. Note that industries are sorted based on most common industry for a DACA-eligible individual before the policy change. Overall, there does not seem to be a major shift in industry composition of DACA-eligibles or natives after the policy change. The most common industries for DACA-eligibles before 2012 remain the most common industries for DACA-eligibles post 2012. The

same result holds for natives.

The most common industries of DACA-eligible immigrants in the labor force are Accommodation and Food Services, Retail Trade, Construction, and Manufacturing. The most common industries for natives are the exact same, though not in the same order. After the policy change in 2012, the fraction of DACA-eligible immigrants not in the labor force drops by roughly 5 percentage points. The remaining industries see some smaller changes, but there does not appear to be large shifts. The lack of shifting between industries before and after the policy suggests that there is no particular industry that is most affected by the policy change. These industries, however, are broadly defined, and there may be shifting within an industry. As individuals are granted work permits, they may shift in to more formal or better matched occupations without a shift in the broad industry composition. I leave this question to future work.

3 Empirical Strategy

I test the effects of DACA on various economic outcomes, evaluating the effect of the DACA policy as a quasi-experiment. Treatment is the degree of exposure to 18-30 year old DACA-eligible immigrants, defined as the fraction of individuals older than 18 in the Consistent Public Use Microdata Area (CPUMA) who are eligible for DACA in the (recent) pre-period. My baseline difference-in-differences with continuous treatment specification is

$$y_{pt} = \alpha_p + \beta_t + \gamma \left(I_{t>2012} \cdot CPUMARatio_p \right) + X_{pt} + \epsilon_{pt} \tag{1}$$

where y_{pt} is the outcome in CPUMA p in year t, α_p is a vector of CPUMA fixed effects, β_t is a vector of year fixed effects, and $I_{t>2012}$ is an indicator for an observation after the policy change. The indicator will be one for any observation in the year 2013 or beyond. Since the earliest applications were accepted in August 2012 with a 4-6 month processing time, the earliest year in which individuals could be impacted by DACA would be 2013.

The key variation in the specification comes from $CPUMARatio_p$. PUMAs are the smallest geographic identifier available in the ACS and consist of areas with 100,000-200,000 individuals. Consistent PUMAs aggregate 1 or more PUMAs that can be consistently identified from 2000 onward, and thus provide rich variation in the number of DACA eligible individuals in a region across the entire United States. In particular, let P_{pt}^{DACA} be the stock of DACA-eligible immigrants older than 18 in CPUMA p in year t and $P_{pt}^{Total,18-64}$ be the total stock of individuals in CPUMA p in year t aged 18-64. $CPUMARatio_p$ is the average ratio of the DACA-eligible population to the entire working-age population in CPUMA p in years 2009-2012 $\left(CPUMARatio_p = \frac{1}{4} \sum_{k=2009}^{2012} \frac{P_{pk}^{DACA}}{P_{pk}^{Total,18-64}} \right)$. $CPUMARatio_p$ uses the recent pre-period to develop an average measure of exposure. In practice, using the value from just the year 2012 (or any other year) makes minimal difference as the value is highly correlated through years.

Figure 1 depicts the level of variation across CPUMAs using the various measures of exposure. Panel A uses the standard measure of DACA-eligible without accounting for varying program participation rates. The share of the population comprised of DACA-eligible immigrants spans from no exposure to 4.2 percent of the population. The mean exposure level is 0.7%, with a standard deviation of 0.007. Panel B adjusts the standard exposure measure to account for varying program participation by country of birth. This adjustment is done by multiplying each observation in P_{pk}^{DACA} by the program participation rate by country of birth. When looking at a birthplace-adjusted treatment measure, the range of exposure levels is 0 to 2.4% with a mean value of 0.3% (standard deviation .003). Panel C adjusts the standard exposure measure to account for varying program participation by state of residence. This adjustment is similar to the country of birth adjustment. P_{pk}^{DACA} is multiplied by the program participation in the state of residence. When looking at a state of residence-adjusted treatment measure, the range of exposure levels is 0 to 2.2% with a mean value of 0.3% (standard deviation .003).

X_{pt} is a vector of CPUMA-specific controls. I include various controls to try to account

for possible differential pre-trends. One reason for differential pre-trends could be due to the observation period of interest including the Great Recession and its recovery. It may be that regions with the highest share of DACA-eligible immigrants were differentially shocked by the Great Recession compared to regions with lower shares of DACA-eligible immigrants. To control for severity of the Great Recession, I interact CPUMA-level measures of Great Recession severity (interacted with year dummies) following Yagan (2019). In particular, the severity measure calculates the difference in unemployment experienced in a CPUMA between 2007 and 2009. I also include controls for baseline average years of education and demographic controls (fraction black, fraction Hispanic, and fraction in poverty), interacted with year dummies. It is possible that DACA-eligible immigrants (or their parents) selectively choose locations based on characteristics such as education, racial/ethnic makeup, and overall poverty status. In addition, these factors may impact a region's ability to adjust in the Great Recession, thus possibly serving as another measure of Great Recession severity.[6]

One additional concern may be that regions with high DACA exposure also have high foreign born exposure in general. As expected, Figure 1 depicts that the highest exposure regions are located in California, Texas, and southern Florida. If there is a change with the foreign born population that occurs at the same time as the policy and this change also impacts labor market outcomes of natives or DACA-ineligible immigrants, I would inaccurately conclude that the DACA policy had an impact on these groups.[7] In order to control for changes caused by the foreign born population around the policy change, which will be highly correlated with DACA exposure but unrelated to the policy itself, I include a "Share Foreign Born Effect" as a control. The Share Foreign Born Effect is calculated analogously to $CPUMARatio_p$, but the numerator is comprised of all foreign born individuals in the CPUMA prior to the policy change and the denominator is all individuals in the CPUMA prior to the policy change. This "Share Foreign Born Effect"

[6]For example, Bauer and Shambaugh (2018) discusses lag in recovery by education level after the Great Recession.

[7]For example, it is documented that immigration has slowed considerably following the Great Recession (Massey (2012)).

is then interacted with a vector of year dummies. While controlling for the foreign born population is important, the foreign born measure and the key variation of interest, DACA exposure, are highly correlated. Including the share foreign born as a control would identify the impact of exposure to DACA-eligible immigrants within CPUMAs that have the same level of foreign born population. Including this as a control interacted with a flexible time trend may reduce the level of variation, leading to identification off of several data points.

The variable ϵ_{pt} is an error term, and γ is the coefficient of interest. All regressions are weighted with the ACS sampling weights, with standard errors clustered by CPUMA. Observations in the main analysis are at the CPUMA-year level.

Assuming that trends in the outcomes of interest would have been similar in the regions most affected by the policy to trends in regions less affected by the policy had the policy not occurred, the estimate $\hat{\gamma}$ identifies the effect of the policy. The main economic outcomes of interest are the fraction working, the labor force participation rate, the unemployment rate and average inverse hyperbolic sine of income. I conduct analyses on various subgroups that may be particularly impacted by the policy change. In particular, I consider heterogeneous effects for various age and skill groups.

The DACA program can have a number of effects on the broader labor market, leading the sign of the empirical relationship between exposure to DACA-eligible immigrants and labor market outcomes to be ambiguous. Many papers in the literature have studied the effect of DACA receipt on the DACA-eligible and the findings are important to consider in the context of this paper. Prior research suggests that DACA-eligible immigrants shift into employment, either coming from unemployment (Pope (2016)) or from college enrollment (Amuedo-Dorantes and Antman (2017)). In this case, a standard labor supply model would predict employment and wages of natives would fall due to increased competition in the labor market. However, many studies in the literature have not found support for the labor supply model due to, for example, complementarities between natives and immigrants,

increased productivity, or specialization.[8] Rather than the negative impact theorized in the labor supply model, many studies instead have found no (or positive) effects. Thus, it is possible to find positive, negative, or null effects when DACA-eligible immigrants enter the workforce from unemployment or from school enrollment.

Another possibility is that DACA recipients previously employed in the informal sector shift into formal sector work. For example, Ortega and Hsin (2018) find large barriers to undocumented workers in healthcare and education. A standard labor supply model would again predict increased competition for high-skilled workers in the formal sector. At the same time, there would be less competition in the more informal sectors. This highlights the importance of considering impacts by skill, as there could be opposite effects by skill that generates an overall null effect. Yet another option in this scenario is that within the more informal sectors (sectors that do not require licensing, for example), DACA recipients have higher bargaining power after the policy and the price of DACA workers increases. This could encourage employers to shift toward native or DACA-ineligible immigrant workers with no impact on wages. Alternatively, the eligible population could bargain for wages in a way that induces positive wage effects for other groups. Under this scenario, these mechanisms can again justify positive, negative, or null effects.

A third option is DACA-eligible immigrants choosing to remain enrolled in school instead of working, as documented in Kuka et al. (2018). In this case, I would expect no effect on employment or wages as there would be no change in the labor market. It is important to note that any and all of these explanations could be occurring simultaneously. It is not possible in this study to isolate which mechanism is driving the results. Instead, I will investigate the overall effect empirically with these scenarios as possible drivers for the results I find.

In addition to the above effects, there may be different impacts on immigrants ineligible for DACA, a group that will be comprised of both documented and undocumented immigrants. The DACA-eligible group will become more close substitutes for documented

[8]For example, Amuedo-Dorantes and Bansak (2014), Butcher and Card (1991), Foged and Peri (2016), and Peri (2014), among others

ineligible immigrants and less close substitutes for undocumented ineligible immigrants. An overall null effect may be the result of these opposing impacts. Undocumented immigrants ineligible for DACA, especially those of similar age and skill levels, are nearly identical to DACA-eligible immigrants, except for the ability to obtain a work permit. Thus if DACA-eligible immigrants shift in to more formal sector employment, the jobs formerly held by DACA recipients may then be filled by DACA-ineligible immigrants and the employment of this group will rise. However, it also may be the case that DACA-eligible immigrants will become more preferred due to legal status and may lower the employment of the ineligible population. At the same time, as the DACA-eligible shift into the formal sector, the documented immigrants in this group may face increased competition resulting in worse labor market outcomes. Thus, as with the impacts on natives, I am unable to isolate which mechanism is driving the result and instead focus my attention on the empirical analysis.

4 Results

4.1 The Impact of DACA on Natives' Labor Market Outcomes

Figure 2 provides a visual assessment of the passage of DACA on the various labor market outcomes of all natives by intensity of exposure to the DACA-eligible population, allowing for a preliminary analysis of the parallel trends assumption and the impact of the policy using raw data. The figure shows the fraction of natives working, in the labor force, and unemployed, and the inverse hyperbolic sine of income grouped above and below median exposure to the DACA program. It shows the pre-policy trends in labor market outcomes are fairly similar across the range of exposure from 2005 to 2009. Regions with above median exposure to the DACA-eligible population have higher fraction working and higher labor force participation. Trends in the fraction unemployed and the average inverse hyperbolic sine of income are very similar across exposure ranges prior to 2009. In 2009 and 2010, some outcomes see a trend break. In particular, the above median exposure regions saw

a smaller decrease in labor force participation, a larger increase in unemployment, and a larger decrease in income compared to below median exposure regions. This is possibly due to the Great Recession and lends support to using a measure of Great Recession severity as a control. The figure also shows that after the passage of DACA in 2012, higher exposed regions experienced differential labor market outcomes. In particular, the fraction working in the above median regions increased more quickly than below median regions and the unemployment level began to lower back down to the unemployment levels of the other regions. Above median income also appears to increase more rapidly than below median regions. It is important to try to control for the trend break in 2009 and 2010 to determine if the observed changes post-2012 are due to DACA or to post-recession recovery.

I now turn to a linear parametric version of Figure 2, using the difference-in-differences with continuous treatment specification in Equation 1. All regressions are at the CPUMA level and include CPUMA and year fixed effects, and standard errors are clustered at the CPUMA level. The CPUMA fixed effects absorb the influence of time-invariant differences between CPUMAs. The year fixed effects absorb annual trends nationwide.

Table 5 presents the main results for various labor market outcomes for natives. Each panel presents a different dependent variable. Treatment is defined as exposure to DACA-eligible immigrants according to ACS data, without adjusting for participation rates by country of birth or state of residence. The baseline specification, corresponding to Equation 1 with no additional controls, is shown in Column 1. Column 2 controls for the Great Recession severity, Column 3 controls for the average education level, Column 4 controls for the share Hispanic and share black, and Column 5 controls for the share in poverty. Column 6 includes all previously mentioned controls. Column 7 additionally controls for the share foreign-born in a PUMA. While controlling for the foreign born population is important, the foreign born measure and the key variation of interest, DACA exposure, are highly correlated. Including the share foreign born as a control would identify the impact of exposure to DACA-eligible immigrants within CPUMAs that have the same level of foreign

born population. Including this as a control interacted with a flexible time trend may reduce the level of variation, leading to identification off of several data points. Column 6 is thus the preferred specification, but results with foreign born controls are presented in Column 7 nonetheless.

Panel A shows the impact of the policy on the fraction of male natives working in a CPUMA. The baseline specification in Column 1, with no additional controls, indicates that there was a significantly positive impact on the fraction of natives working. The point estimate of 0.818 on the coefficient of interest, *DACA Status Ratio* $\times$ *Post-2012*, implies that a 1-percentage-point higher DACA-exposure rate is associated with a 0.818-percentage-point increase in fraction working.

To interpret the magnitude of this effect, it is helpful to transform the coefficient into how many natives start working per each additional DACA-eligible immigrant. To do this, I calculate how many additional DACA-eligible immigrants would represent a 1-percentage-point higher exposure rate by multiplying the total population aged 18-65 in a CPUMA by 0.01. I calculate how many additional natives would represent a 0.818-percentage-point higher fraction working by multiplying the native male population aged 18-65 in a CPUMA by 0.00818. I then determine the increase in natives working per each additional DACA-eligible immigrant by dividing these two numbers. Evaluated at the mean DACA exposure, this calculation suggests that 3 additional DACA-eligible immigrants is associated with an increase of 1 additional native working.

The addition of most controls has minimal impact on significance and magnitude of the result. The preferred specification in Column 6 suggests that 5 additional DACA-eligible immigrants is associated with an increase of 2 additional native working.

Adding controls for the share foreign born (Column 7) diminishes the magnitude slightly and the result is no longer significant. As discussed above, including this control flexibly likely eliminates much of the available variation and I am unable to precisely estimate the coefficient of interest. The magnitude is similar to the other columns and suggests that 4

additional DACA-eligible immigrants is associated with an increase of 1 additional native working. At the 95 percent confidence interval, I can rule out negative effects larger than a decrease of 1 less native working for 20 additional DACA-eligible immigrants at the mean level of exposure.

The columns suggest there was a non-negative impact of DACA-exposure on the fraction of a CPUMA working. While the estimated coefficient of interest suggests either no or positive impact of DACA on natives' working status, it is useful to examine an event study specification:

$$Y_{pt} = \alpha_p + \beta_t + \sum_{k \neq 2012} \gamma_k \cdot CPUMARatio_p + X_{pt} + \epsilon_{pt} \tag{2}$$

The estimates $\hat{\gamma_k}$ can be used to analyze both possible pre-trends and any dynamic component of treatment. Figure 3A plots the coefficients $\hat{\gamma_k}$ and the 95-percent confidence band with 2012 as the base year. The solid line between 2012 and 2013 represents when DACA became available.

The black (square) line plots coefficients from a regression with no controls, corresponding to a dynamic version of Column 1 in Table 5. The red (triangle) line represents the preferred specification with controls (not including share foreign born controls), corresponding to Column 6.

Figure 3A shows the pre-period coefficients are statistically indistinguishable from zero with the exception of one estimate in the no control version, providing support for the parallel trends assumption. In the post-period, the specifications with no controls are positive and significant. Including more stringent controls does not make a meaningful difference: the pre-period coefficients are statistically indistinguishable from zero and the coefficients following the policy are positive and significant. Taken together, the pre- and post-period coefficients suggest there was a positive impact of exposure to DACA-eligible individuals on the working status of natives.

As Panel A of Table 5 suggests a possible increase in fraction of natives working in regions

more exposed to DACA-eligible individuals, I investigate if these changes stem from drawing individuals into the labor force or drawing individuals out of unemployment. In Panel B of Table 5, the dependent variable is the labor force participation rate in a CPUMA. The baseline specification in Column 1, with no additional controls, indicates that there was a significantly positive impact on the labor force participation rate of natives in more exposed regions. The magnitude in Columns 2-6 is similar to Column 1, and a similar calculation to interpret the percentage point changes as additional natives in the labor force per DACA-eligible immigrant suggests evaluated at the mean exposure, 3 additional DACA-eligible immigrants is associated with an increase of 1 additional native in the labor force. However, this coefficient fails to remain in magnitude or significance once the share foreign born is controlled for in Column 7, but I can rule out negative effects larger than 1 less native in the labor force for 5 additional DACA-eligible immigrants and positive effects larger than 1 additional native in the labor force for 3 additional DACA-eligible immigrants at the 95 percent confidence interval at the mean exposure.

Figure 3B shows the corresponding event study specification. In particular, this panel shows that with no controls, there is a clear upward trend in the coefficients. With the addition of controls, the pre-trend fails to remain significant and most pre-period coefficients are small in magnitude. The post-period coefficients show a slight upward trend, suggesting at least part of the increase in working seen in Panel A can be attributed to drawing natives into the labor force.

In Panel C of Table 5, the dependent variable is the fraction of natives who are unemployed in a CPUMA. The baseline specification suggests a negative and significant effect of exposure to DACA-eligible individuals on the unemployment of natives. This result remains significant across all columns and becomes larger in magnitude when including multiple controls. In particular, the magnitude of Column 6 suggests a 1-percentage-point higher DACA-exposure rate is associated with approximately a 0.538-percentage-point decrease in the fraction of natives in a CPUMA who are unemployed. To interpret the magnitude, I fol-

low a similar calculation as before. In the second step, I multiply the native male labor force by the coefficient of interest to obtain how many native males in the labor force enter/exit unemployment. In Column 6, the coefficients suggest that 3 additional DACA-eligible immigrants is associated with 1 less native being unemployed at the mean exposure.

The event study specification in Figure 3C shows a similar result as the table. With controls, the coefficients in the pre-period are marginally significant. The post-period coefficients are statistically significant, but the magnitude is roughly similar to the magnitude in the pre-period. Taken together, it's possible there was a decrease in unemployment, but due to the trend in the pre-period, the decrease is hard to precisely estimate.

The impact of exposure to DACA-eligible individuals on natives' income is more noisily estimated. In Panel D of Table 5, the dependent variable is the inverse hyperbolic sine of income. The baseline specification in Column 1 suggests an insignificant positive impact of exposure to DACA-eligible individuals. The point estimate for multiple controls in Column 6 suggests a positive impact on income, though imprecisely estimated, indicating that a 1-percentage-point higher DACA-exposure rate is associated with a 3% increase in income. To interpret the magnitude, note that at the mean DACA exposure, a 1-percentage-point higher DACA exposure is equivalent to approximately 2,000 more DACA-eligible immigrants. Thus 1 additional DACA eligible immigrant is associated with very small increases in native income (approximately 0.0015 percent).

Figure 3D shows that pre-policy coefficients show a downward trend without controls. With controls, the coefficients in the pre-period are not statistically significant, but this is mostly due to an increase in variance rather than a small point estimate. The post-period coefficients show an upward trend, but relative to the pre-period, there is no significant change. Taken together, the results in Table 5 and Figure 3 suggest DACA did not depress native wages and may be associated with an increase.

Table 6 checks the main results for robustness. In Column 1, the results from the preferred specification with controls for Great Recession severity, average education in a CPUMA,

share Hispanic and share black in a CPUMA, and the share in poverty in a CPUMA (Column 6 from Table 5). Column 2 removes Texas and California from the analysis. As these two states make up the largest share of DACA recipients, I check if the results are driven entirely by these two states. Column 3 removes the years around the Great Recession (2007-2010). In Column 4, I include the foreign born control interacted with an indicator for the Great Recession, allowing for a different impact during the recession years. In Column 5, I include females in the analysis. Column 6 presents the results at the 1990 Commuting Zone level rather than the consistent PUMA level. Column 7 presents individual level results. Across all specifications, the results do not meaningfully change. The magnitudes and significance are largely similar across the various robustness measures.

The results of this section suggest that exposure to DACA-eligible individuals may have had a positive impact on the fraction of natives working by drawing individuals in to the labor force and out of unemployment. In addition, the income of natives was not harmed by the introduction of DACA.

As discussed in Section 2.2, individuals identified in the data as being DACA-eligible may not actually be eligible since the data does not specifically ask about legal status. I present results in Appendix A using alternative measures of treatment. In particular, in Table A1, I use the same calculation for exposure as in this section, but scale individuals meeting the requirements by the participation rate of their country of birth according to Table 1. In Table A2, I scale individuals meeting the eligibility requirements by the participation rate of their state of residence according to Table 2. In both tables, the trends seen in this section remain.

4.2 The Impact of DACA on DACA-ineligible Immigrants Labor Market Outcomes

While the above section suggests DACA did not depress the fraction of natives working, and possibly drew individuals out of unemployment, the policy may have impacted the group of

non-citizen immigrants that were ineligible to receive DACA. These immigrants are ineligible to receive DACA because they fail to meet at least one of the eligibility criteria. For example, they may not have the required education, be too old in 2012, or not have arrived by the required year and age limit.

Figure 4 provides a visual assessment of the passage of DACA on various labor market outcomes for DACA-ineligible immigrants. The figure shows the fraction of DACA-ineligible immigrants working, in the labor force, and unemployed, as well as the income of all non-citizen immigrant workers grouped by above and below median exposure to the DACA-eligible population. The trends are less stable across groups relative to the sample of natives. In Panel A, the fraction of DACA-ineligible immigrants working declined between 2005 and 2010, then began to increase. In Panel B, there is a relatively steady decrease in labor force participation rates, but the drop between 2009 to 2010 is more severe in the low exposure regions. The unemployment trends in Panel C closely mimics the trend for natives. Unemployment was steady from 2005 to 2008, then increased from 2008 to 2010, especially for the highly exposed regions, and then began to fall. Finally, Panel D shows the income of DACA-ineligible immigrants decreased across levels of exposure until 2010-2011. After 2010 and 2011, income leveled off and then began to rebound slightly around 2014.

Table 7 presents estimates of the treatment effect from Equation 1. As with the analysis for natives, all regressions are at the CPUMA level and include CPUMA and year fixed effects with standard errors clustered at the CPUMA level. Each panel presents a different dependent variable and each column includes the same set of controls as the analogous table for natives (Table 5). Panel A shows the impact of higher exposure to the DACA-eligible population on the fraction of DACA-ineligible immigrants working. The baseline specification in Column 1 suggests that a 1-percentage-point increase in the share of a CPUMA eligible for DACA is associated with a 0.871-percentage-point increase in the fraction of DACA-ineligible immigrants working. As with the section on natives, I convert this percentage-point change into the number of additional DACA-ineligible immigrants working per DACA-eligible im-

migrant in a CPUMA. Evaluated at the mean DACA exposure, 50 additional DACA-eligible immigrants is associated with 1 additional DACA-ineligible immigrant working. However, this estimate is not precisely estimated with multiple controls, as seen in Columns 6 and 7.

Estimates corresponding to $\hat{\gamma}$ from Equation 2 are seen in Figure 5A. As with natives, in each panel the black (square) line corresponds to the model with no controls (Column 1) and the red (triangle) line corresponds to the model with all controls except for share foreign born (Column 6). Both versions show the pre- and post-period coefficients are statistically indistinguishable from zero. Taken together, Figure 5 and Table 7 suggest exposure to DACA-eligible individuals did not have an impact on the fraction of DACA-ineligible immigrants working.

Panels B and C of Table 7 and Figure 5 explore if the policy had an impact on the labor force participation or unemployment of DACA-ineligible immigrants. The baseline specification in Panel B of Table 7 indicates a positive and significant impact of the policy on the labor force participation of DACA-ineligible immigrants. The point estimate suggests a 1-percentage-point higher exposure to DACA-eligible immigrants is associated with a 0.553-percentage-point increase in the fraction of DACA-ineligible immigrants in the labor force (or 75 additional DACA-eligible immigrants associated with 1 additional DACA-ineligible immigrant in the labor force at the mean exposure). However, this point estimate becomes negative and imprecisely estimated once including additional controls.

On the other hand, Panel C of Table 7 indicates a negative impact of the policy on the share of DACA-ineligible immigrants who are unemployed. The point estimate in Column 6 suggests a 1-percentage-point higher exposure to DACA-eligible immigrants is associated with a 0.661-percentage-point decrease in the unemployment rate of DACA-ineligible immigrants (or 80 additional DACA-eligible immigrants associated with 1 less DACA-ineligible immigrant unemployed at the mean exposure).

The event study specification of the labor force participation impact in Figure 5B shows the point estimates are flat throughout the entire period of study, though the coefficients are

more noisily estimated with controls. Figure 5C shows a similar pattern: the point estimates are small in magnitude without controls and show no clear pattern with controls. Figure 5 and Table 7 suggest exposure to DACA-eligible individuals had no impact on the labor force participation rate of DACA-ineligible individuals.

Finally, Figure 5D investigates the impact of the policy on the income of DACA-ineligible immigrants. In all specifications, the coefficients are usually not statistically distinguishable from zero, suggesting the policy did not impact the wages of DACA-ineligible immigrants. Panel D of Table 7 provides the results from Equation 1. The impacts cannot be precisely estimated in most specifications. Taken together, the figure and table suggest no impact on the income of DACA-ineligible immigrants.

Table 8 checks the main results for robustness. The various columns are analogous as in Table 6. In Column 1, the results from the preferred specification with controls for Great Recession severity, average education in a CPUMA, share Hispanic and share black in a CPUMA, and the share in poverty in a CPUMA (Column 6 from Table 7). Column 2 removes Texas and California from the analysis. Column 3 removes the years around the Great Recession (2007-2010). In Column 4, I include the foreign born control interacted with an indicator for the Great Recession, allowing for a different impact during the recession years. In Column 5, I include females in the analysis. Column 6 presents the results at the 1990 Commuting Zone level rather than the consistent PUMA level. Column 7 presents individual level results. As with the robustness measures for natives, the results do not meaningfully change across the specifications. The magnitudes and significance are largely similar across the various robustness measures.

Overall, this section suggests the policy had no discernible impact on any labor market outcome of DACA-ineligible immigrants. In addition, the magnitude of the results suggest much smaller impacts on DACA-ineligible immigrants than on natives.

4.3 Heterogeneous Impact by Skill and Age

Impact of DACA on Natives by Skill and Age Group

As the DACA policy capped the maximum age of a recipient to 30 years old as of 2012, it is possible that certain groups were differentially impacted. First, DACA might impact native workers of similar ages, as they are likely to have more similar education and experience levels. Second, DACA might differentially impact older native workers, as these workers may more flexibly respond to an increase in competition via opting to retire. For this reason, I repeat the analysis on combinations of skill (less than college and college degree or more) and age (less than 30 and more than 55). In the main text, I present results for likelihood of working and unemployment as these are the outcomes with an identified impact in the overall analysis. Results for labor force participation and income are available in Appendix A.

Results for the fraction of natives working by skill and age group are presented in Table 9. The only groups that have suggestive evidence of an impact are low-skill, young workers and low-skill, old workers. In particular, the baseline estimations suggest a positive impact for low-skill, young workers and a negative impact for low-skill, old workers. In fact, the baseline estimations for low-skilled young workers suggest a 1-percentage-point increase in exposure is associated with an increase in the fraction working by 0.773 percentage points and the the baseline estimations for low-skilled old workers suggest a 1-percentage-point increase in exposure is associated with a decrease in the fraction working by 0.818 percentage points. However, the estimated coefficient cannot be precisely estimated for low-skill old workers in the preferred specification in Column 6.

The yearly estimates from Equation 2 for each age and skill group for the fraction of a CPUMA working are plotted in Figure 6. The results are noisier than the estimation on the entire population, but most pre- and post-policy coefficients are not statistically different from zero. While the results on the entire population suggest an aggregate positive impact of the policy on the fraction of natives working, the heterogeneous analysis indicates that

no particular group was driving the positive results. There is a possible slight upward trend for low-skill, young workers, but it is much more nuanced than the trend seen for the overall population.

For unemployment, the panels in Figure 7 show the coefficients from Equation 2 for each skill and age group. Panel A shows low-skill, young workers in more exposed regions saw larger decreases in unemployment after the policy compared to lower exposed regions. The remaining groups do not show a particular impact of the policy. Table 10 shows that low-skill, young workers did indeed have a decrease in unemployment following the policy. The estimate suggests that for low-skilled, young workers, a 1-percentage-point increase in exposure to the DACA-eligible population is associated with approximately a 0.8 percentage point decrease in unemployment in the preferred specification in Column 6.

In Appendix A, Figure A1 and Table A5 show results for the labor force participation of natives. Figure A2 and Table A6 present results for the income of natives. For both outcomes, results cannot be precisely estimated for any group.

Overall, the analysis of this section suggests that no one group was driving the overall results. There is, however, some evidence that young, low-skilled workers may have been at least partially driving the increase in working and decrease in unemployment.

Impact of DACA on DACA-ineligible Immigrants by Skill and Age Group

As with the analysis on natives, I repeat the analysis on DACA-ineligible immigrants by skill and age groups. While the overall results suggest no impact of exposure to DACA-eligible immigrants on DACA-ineligible immigrants, it is possible that there were heterogeneous impacts across groups as DACA-ineligible immigrants of similar age and skill levels may become more or less substitutable for DACA-eligible immigrants.

Figure 8 plots the coefficients from Equation 2 with the share of DACA-ineligible immigrants in a CPUMA working as the dependent variable. While each panel is noisily estimated, the coefficients are not statistically different from zero. The corresponding table, Table 11 also shows no significant impact of the policy.

In Figure 9, the outcome of interest is unemployment. As with the results for working, these figures are noisily estimated, but the point estimates do not suggest any group had a particular impact from the policy. Table 12 provides additional support that no group was differentially impacted: no group has estimates that can be consistently precisely estimated.

Appendix A provides results investigating heterogeneous impacts by race. While the main results have included all males, it is possible races were impacted differently.[9] The results for white men in Figure A5 and black men in Figure A6 suggest the results are driven by white males. The main patterns (increased fraction working, decreased unemployment, and no change in labor force participation) is also seen in the results for white males. For black males, however, the trends do not hold and the coefficients are not statistically distinguishable from zero.

5 Conclusion

In this paper, I quantify the labor market impacts of DACA, a policy that granted a large number of undocumented individuals temporary work permits, on natives and immigrants ineligible to take up the policy. I obtain variation in exposure to the policy given by the number of DACA-eligible immigrants in a region. Using a difference-in-differences with continuous treatment design, I show the impacts on the fraction working, in the labor force, and unemployed, as well as income of natives and ineligible immigrants.

The results show that on average, DACA did not depress the fraction of natives working. In fact, there is suggestive evidence that the policy had a positive effect on the fraction of natives working. This positive result is driven by drawing individuals out of unemployment and increasing the share in the labor force. In addition, there was a non-negative impact on incomes. For DACA-ineligible immigrants, however, the results suggest the policy had no impact on the fraction of the population working. Heterogeneous analysis provides some

[9]For example, Borjas et al. (2010) study the link between immigration and labor market outcomes of black males, finding a negative impact of immigration on the wages and employment of black men.

suggestive evidence that young, low-skilled workers were driving the results for natives.

It is important to emphasize that I focus on the short-term effects of a temporary immigration policy. DACA provided temporary deferral from deportation and work authorization for a specified population. In particular, this population was a group of long-term residents who were living and participating in the United States economy. It is not clear that these short-term effects driven by granting temporary permits should extrapolate to a more long-term immigration policy solution, such as the Dream Act. On one hand, this undocumented population is already living and working in the United States' economy and granting permanent citizenship may not change long-term outcomes. On the other hand, as DACA individuals increase human capital investments in response to the policy (Kuka et al. (2018)), I may expect to see an overall shift in the composition of skill for this group in the long-run that may create different impacts than the results seen in this paper.

However, my results are important to consider in light of the Trump administration's recent attempts to rescind the program. I find no evidence that granting work permits reduced various labor market outcomes for natives. In addition, there is no evidence that the policy reduce the various labor market outcomes for DACA-ineligible immigrants, a group that may be more similar to the targeted group. Future work could apply the methods of this paper to more long-term immigration reform, such as Immigration Reform and Control Act 1986 (IRCA).

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Table 1: DACA Participation Rate by Country of Birth

Country	Participation Rate
Mexico	65
El Salvador	62
Honduras	57
Brazil	52
Peru	49
Ecuador	43
Guatemala	32
Jamaica	32
Venezuela	29
Costa Rica	27
Colombia	26
Philippines	21
Nicaragua	19
India	16
Guyana	15
South Korea	15
Thailand	3
China	3

Data represents the participation rate as of January 31, 2018 by country of origin. The program participation rate refers to the share of the immediately eligible population who were current DACA recipients as of January 31, 2018. Data obtained from Migration Policy Institute.

Table 2: DACA Participation Rate by State of Residence

State of Residence	Participation Rate
Panel A: Top 10 States	
Indiana	80
Nevada	77
Utah	74
Arizona	72
Nebraska	71
Kansas	70
Idaho	68
Wisconsin	67
Oregon	67
Colorado	66
Panel B: Bottom 10 States	
Florida	37
Connecticut	35
Maryland	35
Louisiana	34
Virginia	34
New Jersey	33
Massachusetts	31
Pennsylvania	30
Rhode Island	28
Hawaii	18

Data represents the participation rate as of January 31, 2018 by state of residence. The program participation rate refers to the share of the immediately eligible population who were current DACA recipients as of January 31, 2018. Several states (Alaska, Maine, Montana, New Hampshire, North Dakota, South Dakota, Vermont, West Virginia, Wyoming, and District of Columbia) lack program participation rate data and are given zero weight. Data obtained from Migration Policy Institute.

Table 3: Descriptive Statistics

	DACA Eligible Immigrants	Non-DACA Eligible Immigrants	Natives	Natives Aged 18-35
Male	0.53	0.53	0.50	0.51
Age	23.70	38.79	40.39	26.09
Married	0.22	0.60	0.48	0.28
Hispanic Ethnicity	0.68	0.59	0.10	0.14
Spanish Home Language	0.66	0.57	0.07	0.10
Year of Immigration	1997	1999		
Age Entered USA	8.32	25.82		
Years in US	15.39	12.98		
Born in Latin America	0.74	0.64		
High School Degree	0.46	0.23	0.29	0.28
Some College	0.38	0.15	0.34	0.38
College Degree	0.10	0.23	0.28	0.23
Attending School	0.37	0.08	0.13	0.29
Self Employed	0.05	0.11	0.09	0.04
In Poverty	0.23	0.23	0.15	0.21
Exposure, 18-64	0.01	0.01	0.01	0.01
Foreign-Born Ratio	0.23	0.23	0.12	0.13
Working	0.64	0.68	0.71	0.69
Unemployed	0.11	0.07	0.07	0.10
In Labor Force	0.72	0.74	0.76	0.77
Total Income	15,657.41	26,182.15	38,212.58	23,754.13
	7.64	8.36	9.61	8.88
Observations	135,834	1,860,748	22,269,178	7,920,816

Note: Data are from the 2005-2018 American Community Survey (ACS). The sample is composed of all individuals aged 18-65. DACA-eligible immigrants are characterized in the data according to DACA eligibility requirements outlined in the main text. DACA-ineligible immigrants are foreign-born non-citizens who do not meet at least one of the DACA eligibility requirements. Natives are non-immigrant citizens.

Table 4: Common Industries of DACA-eligible Individuals

	DACA-eligibles Pre-2012	DACA-eligibles Post-2012	Natives Pre-2012	Natives Post-2012
Not In Labor Force	0.187	0.138	0.095	0.117
Accommodation and Food Services	0.137	0.146	0.052	0.058
Retail Trade	0.130	0.117	0.101	0.100
Construction	0.109	0.125	0.107	0.092
Manufacturing	0.077	0.085	0.132	0.122
Administrative and Support and Waste Management Services	0.059	0.062	0.043	0.045
Other Services, Except Public Administration	0.037	0.045	0.037	0.036
Educational Services	0.028	0.030	0.048	0.048
Unemployed	0.028	0.023	0.007	0.010
Health Care and Social Assistance	0.027	0.029	0.045	0.048

Note: Data are from the 2005-2015 American Community Survey (ACS). The sample is composed of all DACA and native males aged 18-65. DACA-eligible immigrants are identified as described in the main text. Industries are sorted by most common industry for DACA-eligible immigrants before the policy change.

Table 5: Impact of DACA Exposure on Labor Market Outcomes of Natives

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	0.818***	0.803***	0.946***	1.366***	0.915***	1.093***	0.546
	(0.121)	(0.118)	(0.124)	(0.215)	(0.122)	(0.226)	(0.339)
	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.726***	0.729***	0.804***	1.101***	0.798***	0.708***	0.177
	(0.113)	(0.114)	(0.113)	(0.194)	(0.112)	(0.210)	(0.322)
	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.218***	-0.198**	-0.238***	-0.394***	-0.239***	-0.538***	-0.444*
	(0.082)	(0.081)	(0.085)	(0.152)	(0.083)	(0.154)	(0.234)
	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	0.778	0.560	1.988*	6.491***	1.669	3.095	1.807
	(1.062)	(1.088)	(1.146)	(1.903)	(1.116)	(2.253)	(3.126)
	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects for natives of exposure to DACA-eligible immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. The dependent variable mean in 2012 is listed in brackets. Data covers male natives aged 18-65 in years 2005 - 2018.

Table 6: Robustness for Labor Market Outcomes of Natives

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	1.093***	1.064***	1.318***	0.628**	1.077***	1.914***	0.833***
	(0.226)	(0.261)	(0.231)	(0.277)	(0.195)	(0.476)	(0.164)
	[0.704]	[0.707]	[0.704]	[0.704]	[0.679]	[0.701]	[0.688]
Observations	15,092	12,866	10,780	15,092	15,092	10,374	11,177,470
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.708***	0.754***	0.891***	0.206	0.766***	0.678	0.439***
	(0.210)	(0.222)	(0.209)	(0.258)	(0.186)	(0.445)	(0.145)
	[0.784]	[0.785]	[0.784]	[0.784]	[0.751]	[0.767]	[0.758]
Observations	15,092	12,866	10,780	15,092	15,092	10,374	11,177,470
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.538***	-0.450**	-0.633***	-0.556***	-0.455***	-1.577***	-0.520***
	(0.154)	(0.191)	(0.156)	(0.194)	(0.130)	(0.392)	(0.125)
	[0.104]	[0.102]	[0.104]	[0.104]	[0.097]	[0.088]	[0.092]
Observations	15,092	12,866	10,780	15,092	15,092	10,374	8,701,129
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	3.095	3.765	4.318*	1.972	2.166	-2.126	-0.192
	(2.253)	(2.449)	(2.341)	(2.556)	(1.931)	(5.170)	(1.364)
	[9.863]	[9.912]	[9.863]	[9.863]	[9.498]	[9.847]	[9.848]
Observations	15,092	12,866	10,780	15,092	15,092	10,374	11,177,470
Clusters	1,078	919	1,078	1,078	1,078	741	1,078
Great Recession Shock x Time Controls	X	X	X	X	X	X	X
Education Level x Time Controls	X	X	X	X	X	X	X
Race/Ethnicity x Time Controls	X	X	X	X	X	X	X
Poverty x Time Controls	X	X	X	X	X	X	X
FB x Time Controls							

Note: Results report the labor market effects for natives of exposure to DACA-eligible immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents the baseline difference-in-differences results from the preferred specification with controls for Great Recession severity, average education levels in a CPUMA, share Hispanic and share black in a CPUMA, and the share in poverty in a CPUMA. Column 2 removes California and Texas. Column 3 removes the years 2007-2010. Column 4 controls for share foreign born in a CPUMA with an indicator for Great Recession period. Column 5 includes females. Column 6 performs the analysis at the 1990 Commuting Zone level. Column 7 performs the analysis at the individual level. Standard errors are clustered by CPUMA in parentheses (clustered by commuting zone in Column 6). The dependent variable mean in 2012 is listed in brackets.

Table 7: Impact of DACA Exposure on Labor Market Outcomes of DACA-ineligible Immigrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	0.871***	0.836***	1.303***	0.827*	1.087***	0.506	-0.517
	(0.272)	(0.290)	(0.383)	(0.438)	(0.290)	(0.547)	(0.807)
	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.553**	0.529*	0.834**	0.305	0.716***	-0.210	-0.909
	(0.258)	(0.280)	(0.365)	(0.417)	(0.275)	(0.512)	(0.719)
	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.399**	-0.386**	-0.534***	-0.608**	-0.449***	-0.661*	-0.250
	(0.158)	(0.168)	(0.191)	(0.286)	(0.162)	(0.377)	(0.517)
	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	5.737**	5.530**	8.704**	1.926	6.568**	-4.640	-10.509
	(2.565)	(2.754)	(3.764)	(4.243)	(2.683)	(5.154)	(7.594)
	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	14,999	14,999	14,999	14,999	14,999	14,999	14,999
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. The dependent variable mean in 2012 is listed in brackets. Data covers DACA-ineligible, non-citizen male immigrants aged 18-65 in years 2005 - 2018.

Table 8: Robustness for Labor Market Outcomes of DACA-ineligible Immigrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	0.506	0.808	-0.197	0.047	0.537	-0.326	0.358
	(0.547)	(0.724)	(0.633)	(0.719)	(0.471)	(2.588)	(0.279)
	[0.779]	[0.776]	[0.779]	[0.779]	[0.652]	[0.718]	[0.776]
Observations	14,999	12,773	10,705	14,999	15,074	10,287	953,010
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	-0.210	-0.162	-0.374	-0.504	-0.228	-1.990	-0.095
	(0.512)	(0.662)	(0.585)	(0.622)	(0.479)	(2.676)	(0.280)
	[0.838]	[0.834]	[0.838]	[0.838]	[0.716]	[0.769]	[0.838]
Observations	14,999	12,773	10,705	14,999	15,074	10,287	953,010
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.661*	-0.921**	-0.099	-0.454	-0.966***	-1.490	-0.497**
	(0.377)	(0.462)	(0.471)	(0.519)	(0.317)	(1.084)	(0.210)
	[0.070]	[0.069]	[0.070]	[0.070]	[0.089]	[0.064]	[0.073]
Observations	14,918	12,692	10,651	14,918	15,014	10,222	807,116
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	-4.640	0.360	-1.968	-6.759	-1.794	-13.582	-3.152
	(5.154)	(7.016)	(5.544)	(6.376)	(4.432)	(24.894)	(2.304)
	[9.582]	[9.571]	[9.582]	[9.582]	[8.194]	[8.973]	[9.581]
Observations	14,999	12,773	10,705	14,999	15,074	10,287	953,010
Clusters	1,078	919	1,078	1,078	1,078	741	1,078
Great Recession Shock x Time Controls	X	X	X	X	X	X	X
Education Level x Time Controls	X	X	X	X	X	X	X
Race/Ethnicity x Time Controls	X	X	X	X	X	X	X
Poverty x Time Controls	X	X	X	X	X	X	X
FB x Time Controls							

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents the baseline difference-in-differences results from the preferred specification with controls for Great Recession severity, average education levels in a CPUMA, share Hispanic and share black in a CPUMA, and the share in poverty in a CPUMA. Column 2 removes California and Texas. Column 3 removes the years 2007-2010. Column 4 controls for share foreign born in a CPUMA with an indicator for Great Recession period. Column 5 includes females. Column 6 performs the analysis at the 1990 Commuting Zone level. Column 7 performs the analysis at the individual level. Standard errors are clustered by CPUMA in parentheses (clustered by commuting zone in Column 6). The dependent variable mean in 2012 is listed in brackets.

Table 9: Impact of DACA Exposure on Natives' Likelihood of Working by Skill and Age

	Dependent Variable: Working						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	0.773***	0.744***	0.854***	1.156***	0.887***	0.883**	0.732
	(0.194)	(0.194)	(0.211)	(0.376)	(0.193)	(0.411)	(0.622)
Dep. Variable Mean	0.595	0.595	0.595	0.595	0.595	0.595	0.595
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	-0.818***	-0.871***	-0.845***	-0.456	-0.617**	-0.690	0.113
	(0.242)	(0.245)	(0.258)	(0.463)	(0.250)	(0.511)	(0.757)
Dep. Variable Mean	0.558	0.558	0.558	0.558	0.558	0.558	0.558
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	0.433	0.367	0.756**	0.684	0.539*	0.332	-0.721
	(0.299)	(0.305)	(0.353)	(0.531)	(0.307)	(0.602)	(0.834)
Dep. Variable Mean	0.854	0.854	0.854	0.854	0.854	0.854	0.854
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,080	15,080	15,080	15,080	15,080	15,080	15,080
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	0.152	0.225	0.271	1.961***	0.122	1.373	1.169
	(0.386)	(0.384)	(0.395)	(0.733)	(0.381)	(0.840)	(1.058)
Dep. Variable Mean	0.720	0.720	0.720	0.720	0.720	0.720	0.720
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,063	15,063	15,063	15,063	15,063	15,063	15,063

Note: Results report the effects of exposure to DACA-eligible immigrants on the likelihood of working for natives using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers male natives in the various age/skill bins in years 2005 - 2018.

Table 10: Impact of DACA Exposure on Natives' Unemployment by Skill and Age

	Dependent Variable: Unemployed						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	-0.614***	-0.614***	-0.771***	-0.751**	-0.691***	-0.847**	-0.451
	(0.171)	(0.174)	(0.198)	(0.336)	(0.176)	(0.371)	(0.545)
Dep. Variable Mean	0.180	0.180	0.180	0.180	0.180	0.180	0.180
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	0.284*	0.340**	0.206	-0.124	0.194	-0.231	-0.472
	(0.145)	(0.150)	(0.164)	(0.279)	(0.147)	(0.316)	(0.452)
Dep. Variable Mean	0.088	0.088	0.088	0.088	0.088	0.088	0.088
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,089	15,089	15,089	15,089	15,089	15,089	15,089
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	-0.148	-0.038	-0.397	-0.099	-0.222	-0.006	-0.031
	(0.215)	(0.210)	(0.243)	(0.377)	(0.216)	(0.438)	(0.608)
Dep. Variable Mean	0.069	0.069	0.069	0.069	0.069	0.069	0.069
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,076	15,076	15,076	15,076	15,076	15,076	15,076
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	-0.234	-0.220	-0.069	-0.497	-0.204	-0.134	-0.072
	(0.188)	(0.185)	(0.184)	(0.305)	(0.180)	(0.339)	(0.543)
Dep. Variable Mean	0.053	0.053	0.053	0.053	0.053	0.053	0.053
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,030	15,030	15,030	15,030	15,030	15,030	15,030

Note: Results report the effects of exposure to DACA-eligible immigrants on the unemployment of natives using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers male natives in the labor force in the various age/skill bins in years 2005 - 2018.

Table 11: Impact of DACA Exposure on DACA-ineligible Immigrants' Likelihood of Working by Skill and Age

	Dependent Variable: Working						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	1.021*	1.029*	1.349*	1.165	1.430**	1.550	2.100
	(0.578)	(0.598)	(0.760)	(1.115)	(0.601)	(1.336)	(1.899)
Dep. Variable Mean	0.690	0.690	0.690	0.690	0.690	0.690	0.690
Clusters	1,077	1,077	1,077	1,077	1,077	1,077	1,077
Observations	13,514	13,514	13,514	13,514	13,514	13,514	13,514
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	2.130***	2.269***	2.358**	2.692**	2.710***	1.333	0.387
	(0.671)	(0.700)	(0.918)	(1.190)	(0.725)	(1.491)	(2.033)
Dep. Variable Mean	0.619	0.619	0.619	0.619	0.619	0.619	0.619
Clusters	1,061	1,061	1,061	1,061	1,061	1,061	1,061
Observations	11,352	11,352	11,352	11,352	11,352	11,352	11,350
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	0.561	0.630	0.698	-0.233	0.611	0.180	-4.482
	(0.830)	(0.863)	(1.031)	(1.736)	(0.880)	(2.018)	(2.734)
Dep. Variable Mean	0.765	0.765	0.765	0.765	0.765	0.765	0.765
Clusters	994	994	994	994	994	994	993
Observations	9,171	9,171	9,171	9,170	9,171	9,170	9,165
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	1.760	1.437	1.340	0.285	2.147*	0.204	-2.114
	(1.095)	(1.198)	(1.362)	(2.040)	(1.123)	(2.525)	(3.803)
Dep. Variable Mean	0.717	0.717	0.717	0.717	0.717	0.717	0.717
Clusters	961	961	961	960	961	960	953
Observations	7,747	7,747	7,746	7,742	7,747	7,741	7,720

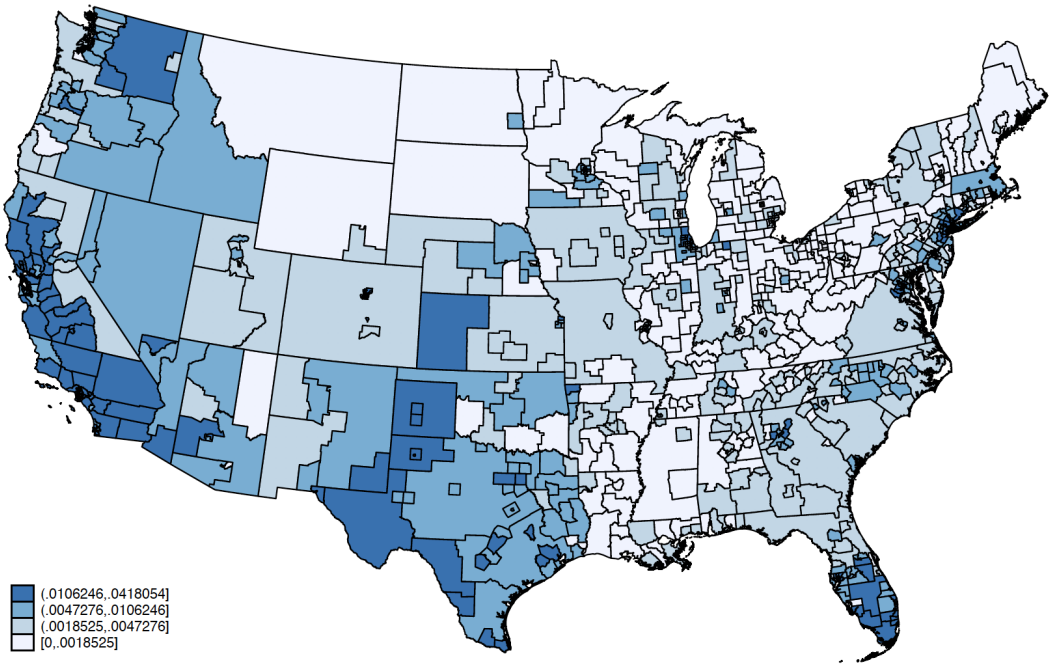
Note: Results report the effects of exposure to DACA-eligible immigrants on the likelihood of working for DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill bins in years 2005 - 2018.

Table 12: Impact of DACA Exposure on DACA-ineligible Immigrants' Unemployment by Skill and Age

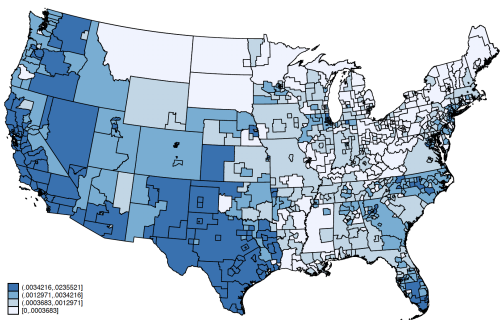
	Dependent Variable: Unemployed						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	0.272	0.351	0.110	-0.122	0.072	-0.620	0.033
	(0.320)	(0.336)	(0.411)	(0.740)	(0.342)	(0.885)	(1.162)
Dep. Variable Mean	0.089	0.089	0.089	0.089	0.089	0.089	0.089
Clusters	1,071	1,071	1,071	1,071	1,071	1,071	1,071
Observations	12,659	12,659	12,659	12,659	12,659	12,659	12,659
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	-0.622	-0.615	-0.711	-0.739	-0.706	0.325	1.755
	(0.425)	(0.458)	(0.556)	(0.927)	(0.459)	(1.125)	(1.562)
Dep. Variable Mean	0.123	0.123	0.123	0.123	0.123	0.123	0.123
Clusters	1,036	1,036	1,036	1,036	1,036	1,036	1,035
Observations	10,299	10,299	10,299	10,297	10,299	10,297	10,292
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	-0.901*	-0.843*	-0.476	-1.405	-0.689	-0.598	1.286
	(0.496)	(0.508)	(0.612)	(1.001)	(0.482)	(1.117)	(1.609)
Dep. Variable Mean	0.047	0.047	0.047	0.047	0.047	0.047	0.047
Clusters	963	963	963	963	963	963	959
Observations	8,544	8,544	8,544	8,542	8,544	8,542	8,531
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	-0.367	-0.083	-0.258	-0.562	-0.477	-2.419	0.785
	(0.614)	(0.655)	(0.760)	(1.321)	(0.618)	(1.643)	(2.662)
Dep. Variable Mean	0.068	0.068	0.068	0.068	0.068	0.068	0.068
Clusters	927	927	927	926	927	926	915
Observations	6,867	6,867	6,866	6,857	6,867	6,856	6,819

Note: Results report the effects of exposure to DACA-eligible immigrants on the unemployment of DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers DACA-ineligible, non-citizen male immigrants in the labor force in the various age/skill bins in years 2005 - 2018.

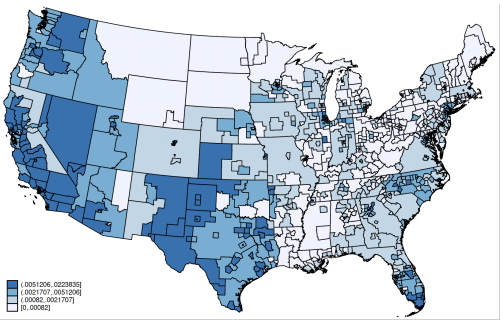
Figure 1: Geographic Variation in Treatment Intensity



(a) Standard Treatment Intensity Map



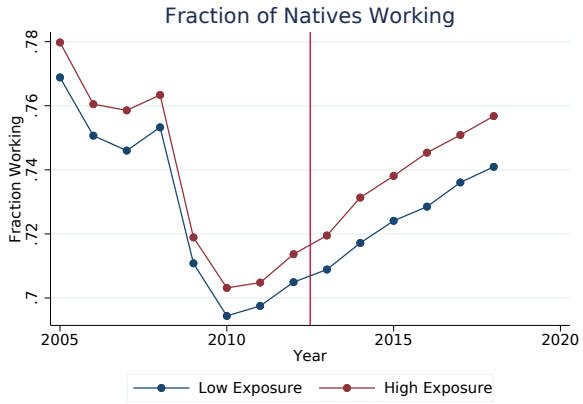
(b) Treatment Intensity Birthplace Adjusted Map



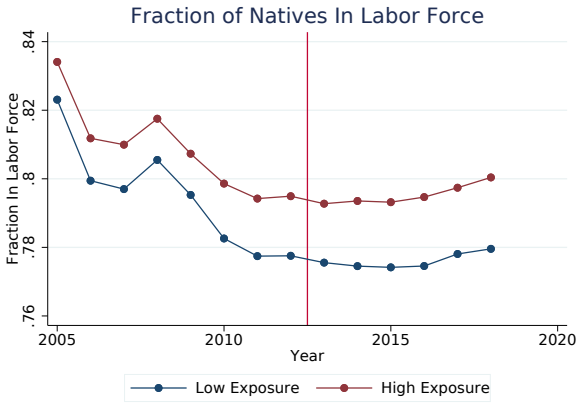
(c) Treatment Intensity State of Residence Adjusted Map

Note: Map represents the average share of DACA-eligible immigrants relative to the population aged 18-64 for 2009-2012. The geographic units are Consistent Public Use Microdata Areas (CPUMAs). Panel A displays the standard exposure in a CPUMA with no adjustments for program participation rate. Panel B and Panel C adjust the DACA exposure to account for differences in the DACA participation rate of the eligible population by birthplace and state of residence as outlined in the text.

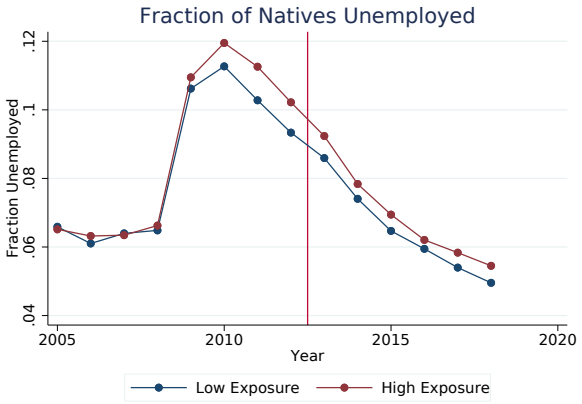
Figure 2: Native Labor Market Outcome Trends by Exposure to DACA Eligible Immigrants



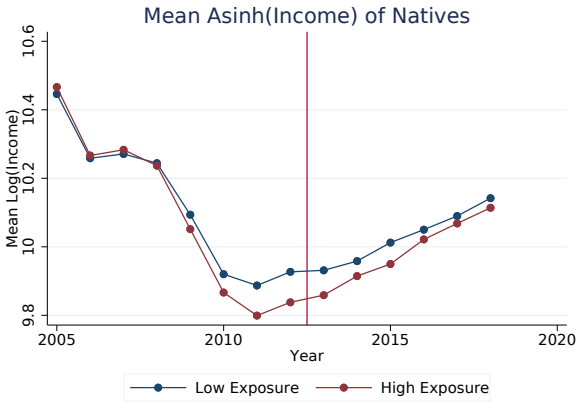
(a) Working



(b) Labor Force Participation



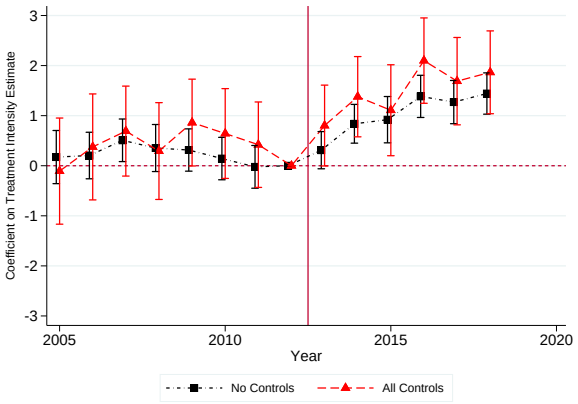
(c) Unemployment



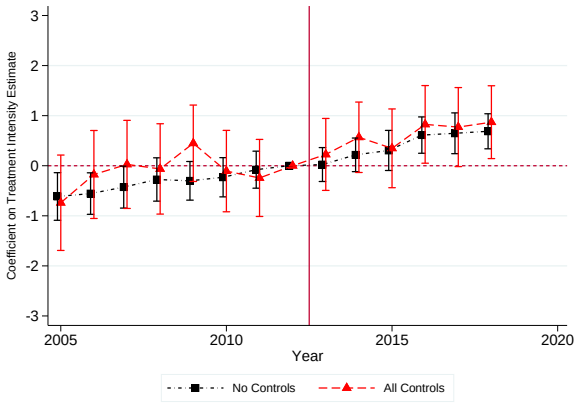
(d) Asinh(Income)

Figure depicts mean labor market outcomes for male natives by exposure level. "Exposure" is intensity of DACA-eligible immigrants relative to entire population at the CPUMA level using the standard measure of DACA eligibility. High Exposure = above median, low exposure = below median. Data covers all native males aged 18-65 from 2005 to 2018.

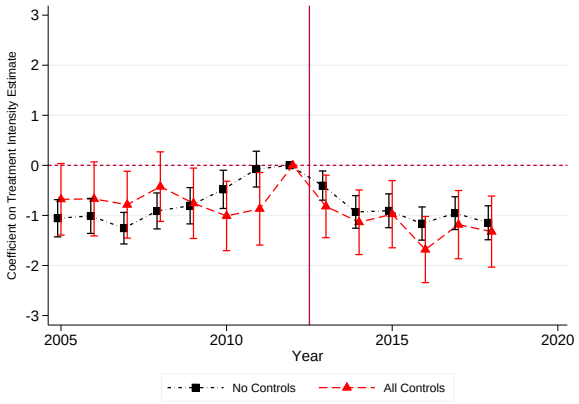
Figure 3: Estimated Impact of DACA Exposure on Labor Market Outcomes of Natives



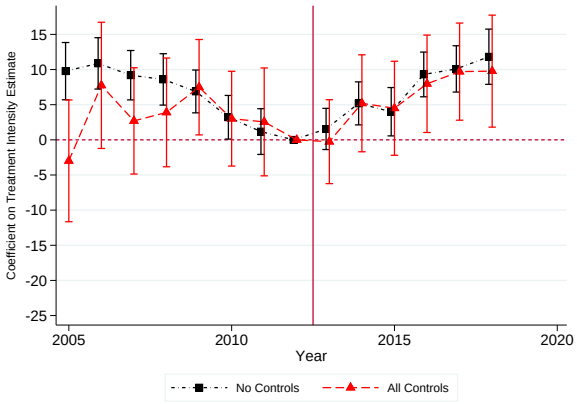
(a) Working



(b) Labor Force Participation



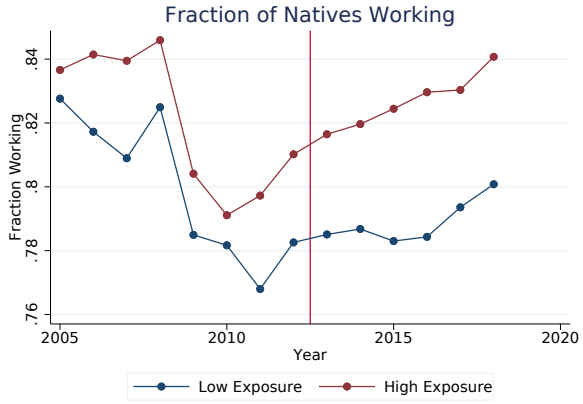
(c) Unemployment



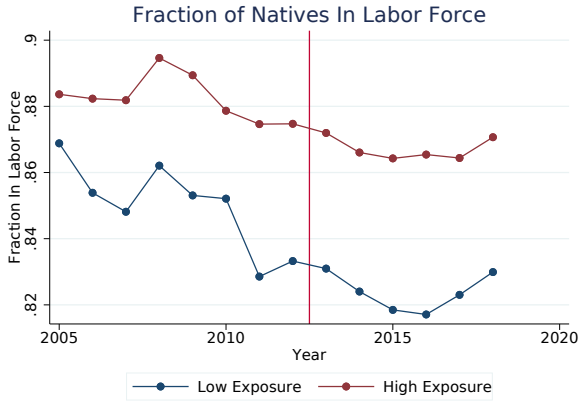
(d) Asinh(Income)

Note: This figure shows the effect of exposure to DACA-eligible immigrants on natives' likelihood of working, labor force participation, unemployment, and income. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers male natives aged 18-65 from 2005-2018.

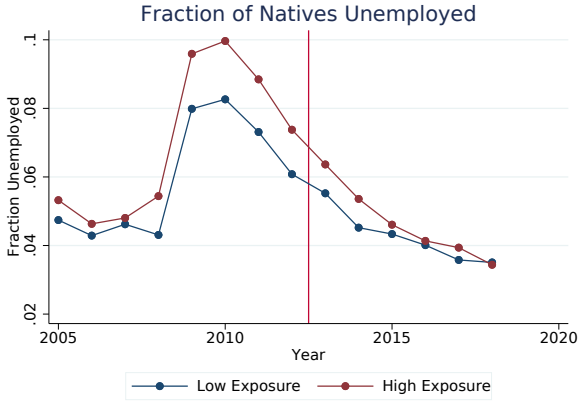
Figure 4: DACA-ineligible Immigrant Labor Market Outcome Trends by Tercile of Exposure to DACA Eligible Immigrants



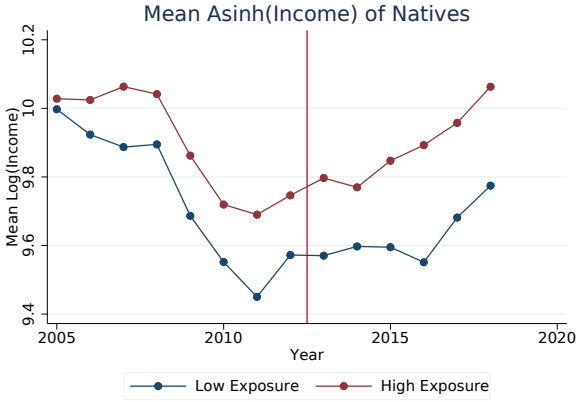
(a) Working



(b) Labor Force Participation



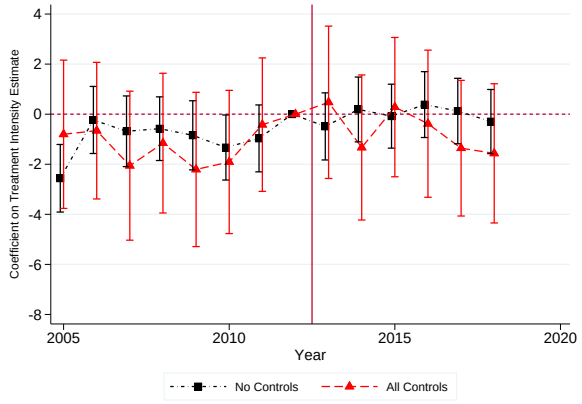
(c) Unemployment



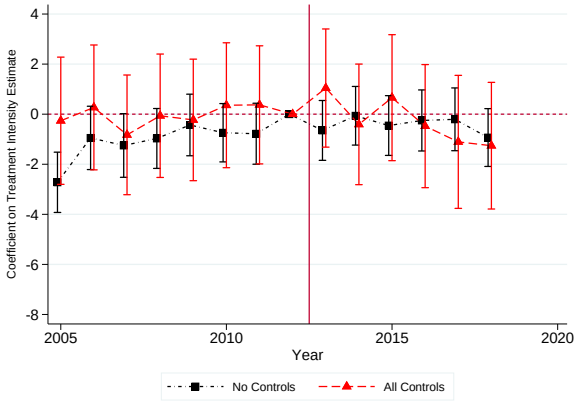
(d) Asinh(Income)

Figure depicts mean labor market outcomes for male DACA-ineligible, non-citizen immigrants by terciles of exposure. "Exposure" is intensity of DACA-eligible immigrants relative to the population aged 18-65 at the PUMA level using the standard measure of DACA eligibility. High Exposure = above median, low exposure = below median. Data covers all DACA-ineligible, non-citizen males aged 18-65 from 2005 to 2018.

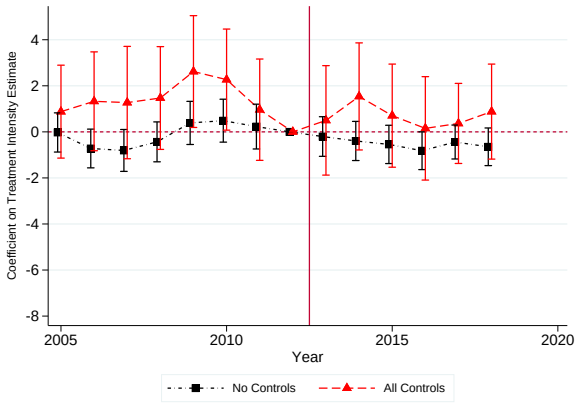
Figure 5: Estimated Impact of DACA Exposure on Labor Market Outcomes of DACA-ineligible Immigrants



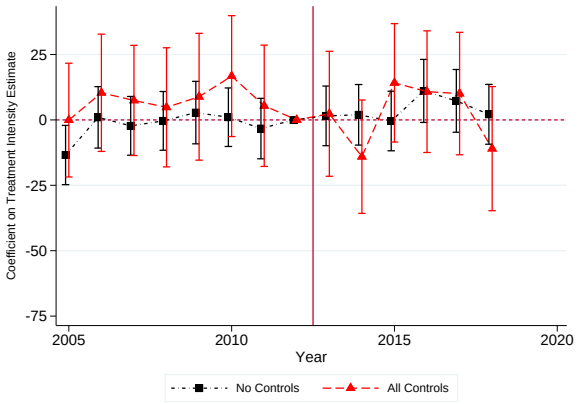
(a) Working



(b) Labor Force Participation



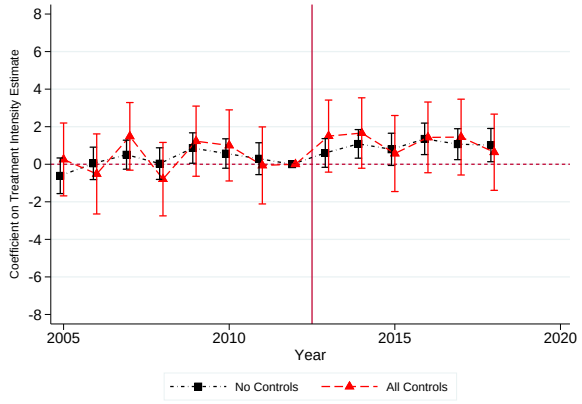
(c) Unemployment



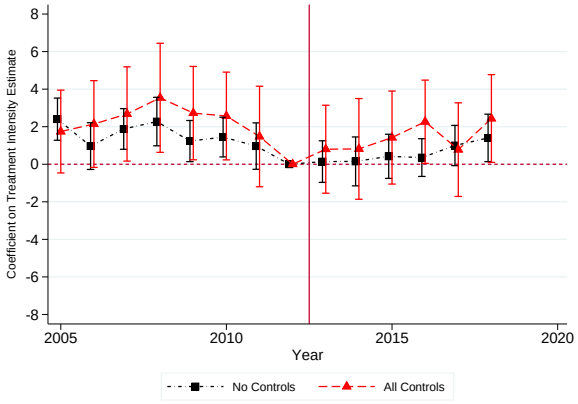
(d) Asinh(Income)

Note: This figure shows the effect of exposure to DACA-eligible immigrants on DACA-ineligible, non-citizen immigrants' likelihood of working, labor force participation, unemployment, and income. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Observations are at the PUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers DACA-ineligible, non-citizen male immigrants aged 18-65 from 2005-2018.

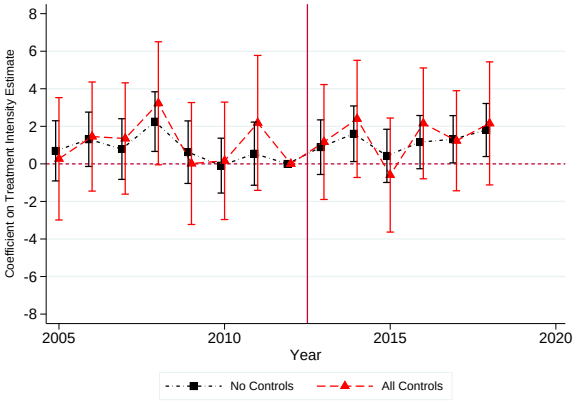
Figure 6: Estimated Impact of DACA Exposure on Natives' Likelihood of Working by Skill and Age



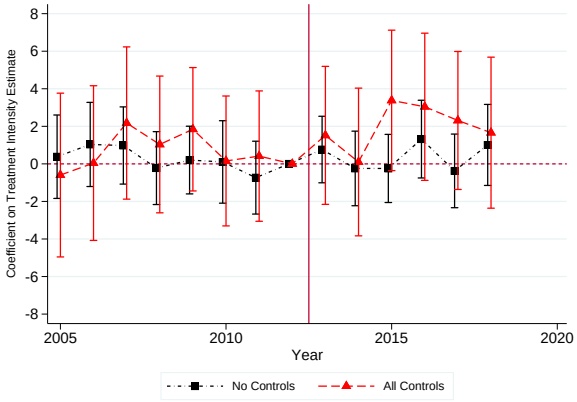
(a) Low-skill, young



(b) Low-skill, old



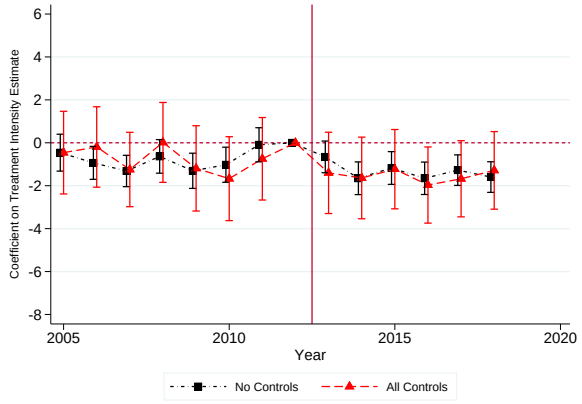
(c) High-skill, young



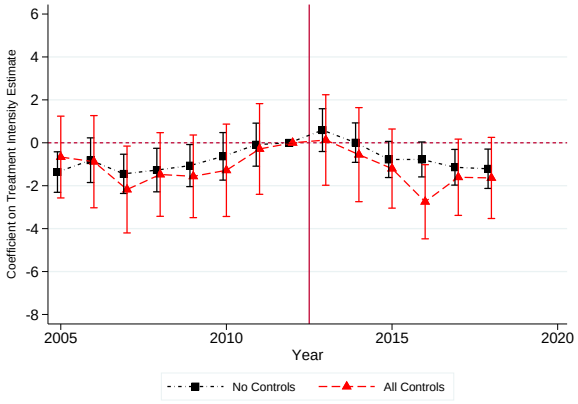
(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on natives' likelihood of working by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the PUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers male natives in the various age/skill categories from 2005-2018.

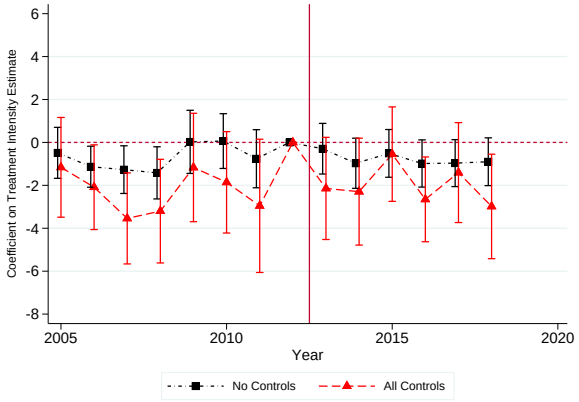
Figure 7: Estimated Impact of DACA Exposure on Natives' Unemployment by Skill and Age



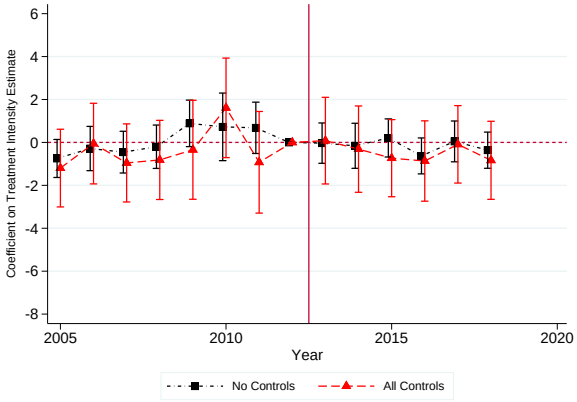
(a) Low-skill, young



(b) Low-skill, old



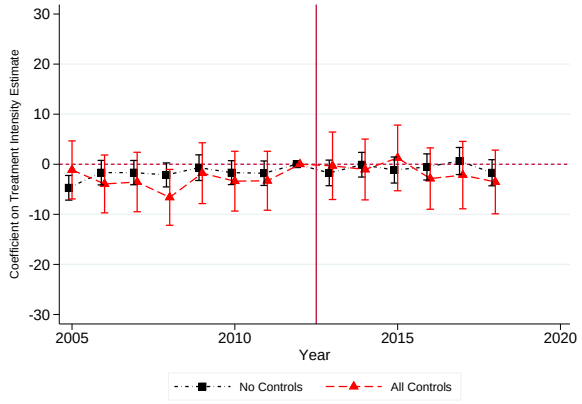
(c) High-skill, young



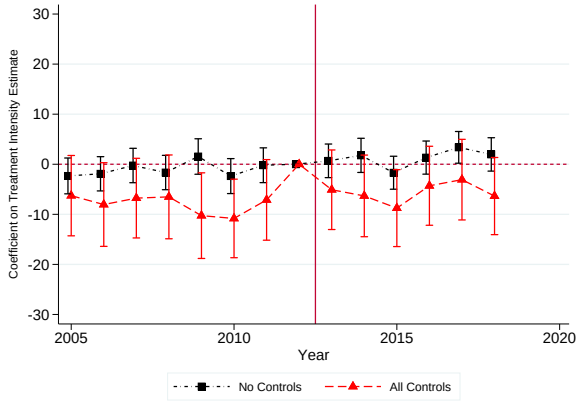
(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on natives' labor force participation by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the PUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers male natives in the various age/skill categories in the labor force from 2005-2018.

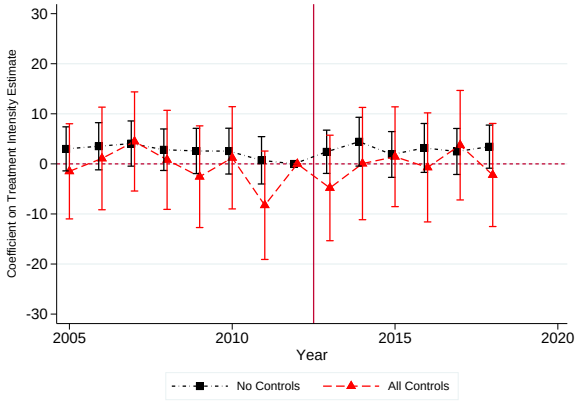
Figure 8: Estimated Impact of DACA Exposure on DACA-ineligible Immigrants' Likelihood of Working by Skill and Age



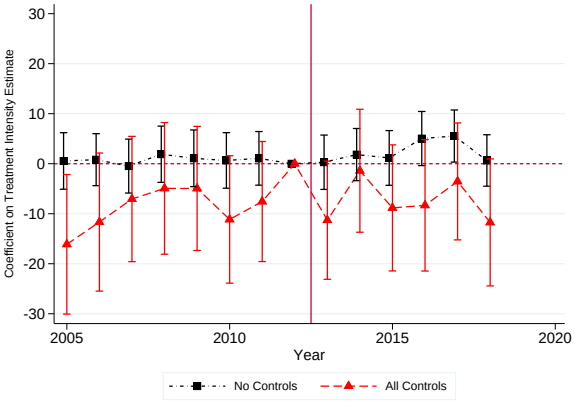
(a) Low-skill, young



(b) Low-skill, old



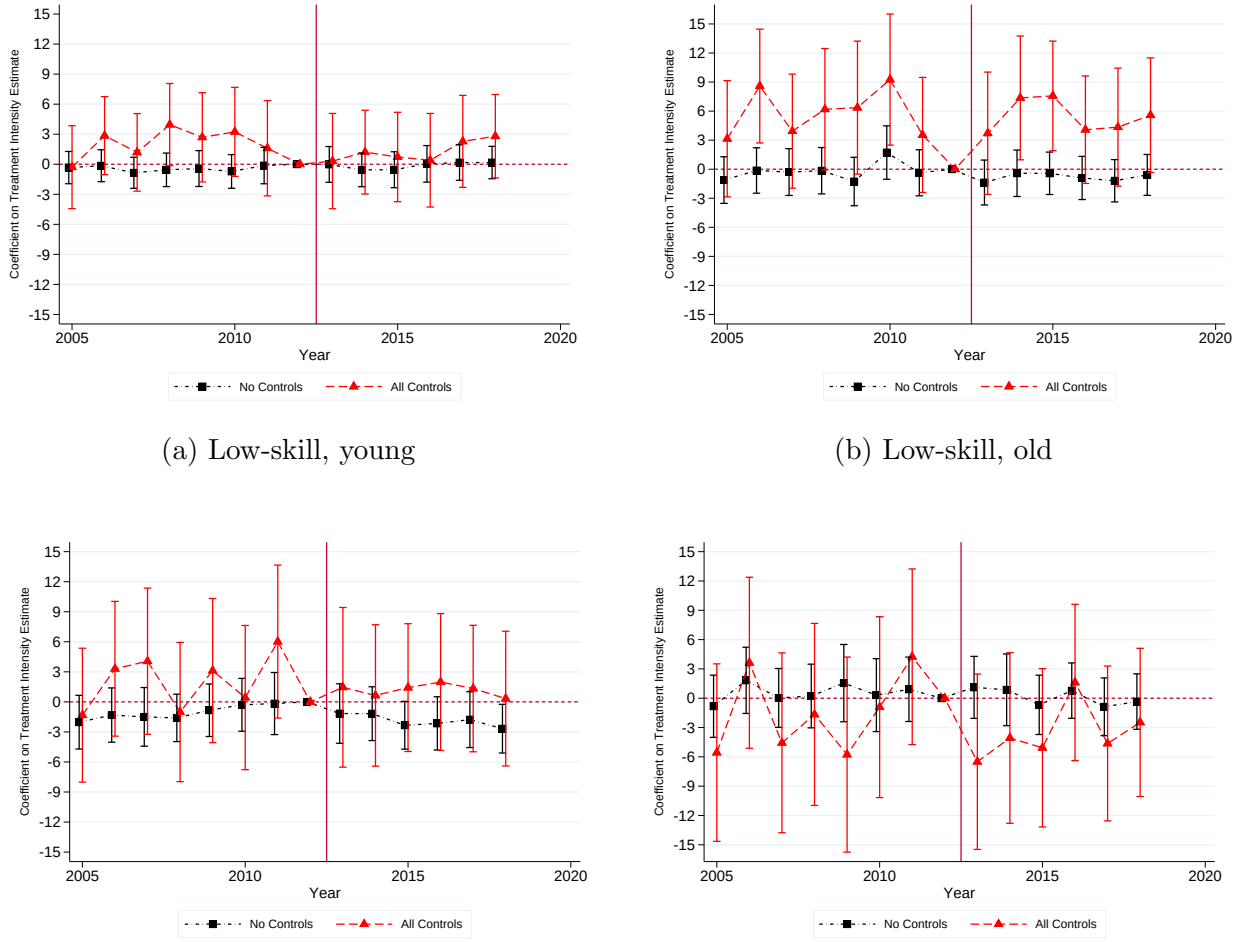
(c) High-skill, young



(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on DACA-ineligible, non-citizen immigrants' likelihood of working by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the PUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill categories from 2005-2018.

Figure 9: Estimated Impact of DACA Exposure on DACA-ineligible Immigrants' Unemployment by Skill and Age



(a) Low-skill, young

(b) Low-skill, old

(c) High-skill, young

(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on DACA-ineligible, non-citizen immigrants' unemployment by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the PUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill categories in the labor force from 2005-2018.

Appendix A Additional Results

Table A1: Impact of Birthplace Adjusted DACA Exposure on Labor Market Outcomes of Natives

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	1.138***	1.069***	1.729***	0.846	1.394***	0.905	0.590
	(0.267)	(0.259)	(0.276)	(0.549)	(0.270)	(0.555)	(0.552)
	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.879***	0.868***	1.383***	0.098	1.130***	0.361	0.226
	(0.235)	(0.236)	(0.259)	(0.487)	(0.235)	(0.502)	(0.509)
	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.476**	-0.404**	-0.452**	-0.872**	-0.463**	-0.620	-0.408
	(0.186)	(0.176)	(0.212)	(0.394)	(0.196)	(0.428)	(0.452)
	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	-0.313	-0.949	6.118**	6.194	1.946	6.515	3.594
	(2.230)	(2.250)	(2.457)	(4.738)	(2.341)	(5.053)	(5.251)
	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects for natives of exposure to DACA-eligible immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants adjusted for immigrant birthplace as described in the text. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity, Column 3 controls for average education levels, Column 4 controls for share black and share Hispanic, Column 5 controls for the share in poverty, and Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. The dependent variable mean in 2012 is listed in brackets. Data covers male natives aged 18-65 in years 2005 - 2018.

Table A2: Impact of State of Residence Adjusted DACA Exposure on Labor Market Outcomes of Natives

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	1.566***	1.528***	1.873***	2.149***	1.785***	1.790***	0.870
	(0.262)	(0.256)	(0.274)	(0.472)	(0.271)	(0.514)	(0.557)
	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]	[0.704]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	1.348***	1.344***	1.579***	1.549***	1.533***	1.152**	0.478
	(0.240)	(0.242)	(0.247)	(0.408)	(0.243)	(0.453)	(0.508)
	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]	[0.784]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.455***	-0.417**	-0.443**	-0.784**	-0.468***	-0.791**	-0.383
	(0.172)	(0.168)	(0.183)	(0.321)	(0.179)	(0.327)	(0.373)
	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]	[0.104]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	1.894	1.390	5.646**	12.136***	4.061*	8.659*	7.758
	(2.175)	(2.228)	(2.414)	(3.943)	(2.316)	(4.581)	(4.990)
	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]	[9.863]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects for natives of exposure to DACA-eligible immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants adjusted for immigrant state of residence as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. The dependent variable mean in 2012 is listed in brackets. Data covers male natives aged 18-65 in years 2005 - 2018.

Table A3: Impact of Birthplace Adjusted DACA Exposure on Labor Market Outcomes of DACA-ineligible Immigrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	1.993***	1.949***	3.313***	1.879**	2.441***	0.523	0.044
	(0.514)	(0.550)	(0.864)	(0.786)	(0.570)	(1.205)	(1.293)
	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	1.270***	1.241**	2.342***	0.897	1.729***	-0.071	-0.057
	(0.481)	(0.520)	(0.835)	(0.758)	(0.553)	(1.097)	(1.143)
	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.868***	-0.854***	-1.102***	-1.046**	-0.850***	-0.493	0.080
	(0.295)	(0.318)	(0.416)	(0.533)	(0.314)	(0.749)	(0.798)
	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	17.485***	17.948***	32.095***	16.209**	20.501***	8.822	8.833
	(4.749)	(5.193)	(8.665)	(7.992)	(5.257)	(11.722)	(12.398)
	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	14,999	14,999	14,999	14,999	14,999	14,999	14,999
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants adjusted for immigrant birthplace as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. The dependent variable mean in 2012 is listed in brackets. Data covers DACA-ineligible, non-citizen male immigrants aged 18-65 in years 2005 - 2018.

Table A4: Impact of State of Residence Adjusted DACA Exposure on Labor Market Outcomes of DACA-ineligible Immigrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	2.004***	1.903***	2.902***	1.567*	2.580***	0.888	-0.174
	(0.602)	(0.637)	(0.869)	(0.917)	(0.659)	(1.218)	(1.460)
	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]	[0.779]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	1.189**	1.095*	1.766**	0.189	1.700***	-0.551	-1.036
	(0.565)	(0.608)	(0.831)	(0.862)	(0.618)	(1.117)	(1.318)
	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]	[0.838]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-1.002***	-0.996***	-1.289***	-1.575**	-1.057***	-1.336*	-0.649
	(0.345)	(0.365)	(0.425)	(0.612)	(0.356)	(0.783)	(0.884)
	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	15.855***	15.327**	23.332***	8.849	19.408***	0.938	0.749
	(5.621)	(5.967)	(8.456)	(8.674)	(5.984)	(11.243)	(13.137)
	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]	[9.582]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	14,999	14,999	14,999	14,999	14,999	14,999	14,999
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants adjusted for immigrant state of residence as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. The dependent variable mean in 2012 is listed in brackets. Data covers DACA-ineligible, non-citizen male immigrants aged 18-65 in years 2005 - 2018.

Table A5: Impact of DACA Exposure on Natives' Labor Force Participation by Skill and Age

	Dependent Variable: In Labor Force						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	0.483**	0.466**	0.437**	0.724**	0.523***	0.295	0.321
	(0.191)	(0.196)	(0.204)	(0.368)	(0.188)	(0.401)	(0.636)
Dep. Variable Mean	0.724	0.724	0.724	0.724	0.724	0.724	0.724
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	-0.654***	-0.680***	-0.769***	-0.632	-0.507**	-0.856*	-0.212
	(0.240)	(0.241)	(0.247)	(0.451)	(0.248)	(0.486)	(0.750)
Dep. Variable Mean	0.610	0.610	0.610	0.610	0.610	0.610	0.610
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	0.356	0.393*	0.441*	0.669	0.385	0.366	-0.771
	(0.229)	(0.238)	(0.267)	(0.440)	(0.239)	(0.484)	(0.693)
Dep. Variable Mean	0.917	0.917	0.917	0.917	0.917	0.917	0.917
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,080	15,080	15,080	15,080	15,080	15,080	15,080
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	0.106	0.191	0.273	1.714**	0.093	1.311*	1.018
	(0.393)	(0.390)	(0.374)	(0.714)	(0.382)	(0.794)	(1.026)
Dep. Variable Mean	0.759	0.759	0.759	0.759	0.759	0.759	0.759
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,063	15,063	15,063	15,063	15,063	15,063	15,063

Note: Results report the effects of exposure to DACA-eligible immigrants on the labor force participation rate of natives using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers male natives in the various age/skill bins in years 2005 - 2018.

Table A6: Impact of DACA Exposure on Natives' Income by Skill and Age

	Dependent Variable: Asinh(Income)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	2.050	1.709	1.376	3.594	3.089	-1.005	0.199
	(1.871)	(1.909)	(2.188)	(3.541)	(1.914)	(4.041)	(6.411)
Dep. Variable Mean	7.959	7.959	7.959	7.959	7.959	7.959	7.959
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	-3.000**	-3.083**	-2.268	4.525*	-2.040	3.335	5.829
	(1.384)	(1.384)	(1.510)	(2.538)	(1.427)	(2.837)	(4.120)
Dep. Variable Mean	10.384	10.384	10.384	10.384	10.384	10.384	10.384
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	-0.653	-1.234	1.175	1.522	-0.522	-1.560	-13.058*
	(2.352)	(2.346)	(2.742)	(4.852)	(2.404)	(5.189)	(7.075)
Dep. Variable Mean	10.205	10.205	10.205	10.205	10.205	10.205	10.205
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,080	15,080	15,080	15,080	15,080	15,080	15,080
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	-0.174	-0.153	0.794	11.130***	-0.387	7.427*	7.187
	(1.864)	(1.821)	(1.966)	(3.446)	(1.924)	(4.085)	(5.027)
Dep. Variable Mean	11.427	11.427	11.427	11.427	11.427	11.427	11.427
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,063	15,063	15,063	15,063	15,063	15,063	15,063

Note: Results report the effects of exposure to DACA-eligible immigrants on the income of natives using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers male natives in the various age/skill bins in years 2005 - 2018.

Table A7: Impact of DACA Exposure on DACA-ineligible Immigrants' Labor Force Participation by Skill and Age

	Dependent Variable: In Labor Force						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	1.215**	1.277**	1.323*	1.072	1.471**	0.763	1.459
	(0.559)	(0.578)	(0.745)	(1.068)	(0.583)	(1.295)	(1.928)
Dep. Variable Mean	0.757	0.757	0.757	0.757	0.757	0.757	0.757
Clusters	1,077	1,077	1,077	1,077	1,077	1,077	1,077
Observations	13,514	13,514	13,514	13,514	13,514	13,514	13,514
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	1.694***	1.810***	1.881**	2.120*	2.164***	1.040	1.140
	(0.634)	(0.656)	(0.882)	(1.233)	(0.696)	(1.472)	(2.043)
Dep. Variable Mean	0.703	0.703	0.703	0.703	0.703	0.703	0.703
Clusters	1,061	1,061	1,061	1,061	1,061	1,061	1,061
Observations	11,352	11,352	11,352	11,352	11,352	11,352	11,350
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	-0.107	-0.076	0.278	-1.200	0.103	-0.463	-3.049
	(0.746)	(0.797)	(0.943)	(1.500)	(0.802)	(1.817)	(2.545)
Dep. Variable Mean	0.803	0.803	0.803	0.803	0.803	0.803	0.803
Clusters	994	994	994	994	994	994	993
Observations	9,171	9,171	9,171	9,170	9,171	9,170	9,165
Panel D: High Skill, Old							
DACA Status Ratio x Post-2012	1.596	1.543	1.409	0.208	1.921*	-0.677	-0.730
	(1.029)	(1.120)	(1.249)	(1.889)	(1.057)	(2.381)	(3.531)
Dep. Variable Mean	0.767	0.767	0.767	0.767	0.767	0.767	0.767
Clusters	961	961	961	960	961	960	953
Observations	7,747	7,747	7,746	7,742	7,747	7,741	7,720

Note: Results report the effects of exposure to DACA-eligible immigrants on the labor force participation of DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill bins in years 2005 - 2018.

Table A8: Impact of DACA Exposure on DACA-ineligible Immigrants' Income by Skill and Age

	Dependent Variable: Asinh(Income)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Low-Skill, Young							
DACA Status Ratio x Post-2012	3.756	5.384	5.779	2.109	5.153	2.326	8.602
	(5.388)	(5.627)	(7.199)	(10.180)	(5.517)	(12.202)	(17.556)
Dep. Variable Mean	8.278	8.278	8.278	8.278	8.278	8.278	8.278
Clusters	1,077	1,077	1,077	1,077	1,077	1,077	1,077
Observations	13,514	13,514	13,514	13,514	13,514	13,514	13,514
Panel B: Low-Skill, Old							
DACA Status Ratio x Post-2012	11.573**	11.407**	10.453	-4.348	12.589**	-21.687**	-27.466*
	(5.260)	(5.585)	(7.087)	(8.721)	(5.854)	(10.827)	(16.128)
Dep. Variable Mean	8.972	8.972	8.972	8.972	8.972	8.972	8.972
Clusters	1,061	1,061	1,061	1,061	1,061	1,061	1,061
Observations	11,352	11,352	11,352	11,352	11,352	11,352	11,350
Panel C: High-Skill, Young							
DACA Status Ratio x Post-2012	4.128	3.332	11.805	-1.670	6.545	5.801	-21.663
	(7.315)	(7.616)	(8.540)	(14.507)	(7.696)	(16.766)	(24.204)
Dep. Variable Mean	9.421	9.421	9.421	9.421	9.421	9.421	9.421
Clusters	994	994	994	994	994	994	993
Observations	9,171	9,171	9,171	9,170	9,171	9,170	9,165
Panel D: High-Skill, Old							
DACA Status Ratio x Post-2012	5.879	3.639	4.500	-2.869	7.657	-7.680	-31.578
	(8.516)	(9.786)	(10.526)	(16.342)	(9.129)	(22.049)	(32.897)
Dep. Variable Mean	10.125	10.125	10.125	10.125	10.125	10.125	10.125
Clusters	961	961	961	960	961	960	953
Observations	7,747	7,747	7,746	7,742	7,747	7,741	7,720

Note: Results report the effects of exposure to DACA-eligible immigrants on the income of DACA-ineligible, non-citizen immigrants using a difference-in-differences with continuous treatment regression. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill bins in years 2005 - 2018.

Table A9: Impact of DACA Exposure on Labor Market Outcomes of White Males

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	0.687***	0.683***	0.762***	1.469***	0.779***	1.103***	0.451
	(0.146)	(0.148)	(0.147)	(0.250)	(0.147)	(0.289)	(0.388)
	[0.732]	[0.732]	[0.732]	[0.732]	[0.732]	[0.732]	[0.732]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.699***	0.700***	0.748***	1.402***	0.769***	0.974***	0.278
	(0.132)	(0.132)	(0.139)	(0.242)	(0.131)	(0.271)	(0.348)
	[0.802]	[0.802]	[0.802]	[0.802]	[0.802]	[0.802]	[0.802]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.065	-0.063	-0.050	-0.142	-0.086	-0.210	-0.160
	(0.110)	(0.114)	(0.105)	(0.178)	(0.105)	(0.210)	(0.358)
	[0.090]	[0.090]	[0.090]	[0.090]	[0.090]	[0.090]	[0.090]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	-0.196	-0.306	1.869	9.926***	0.886	6.295**	1.581
	(1.314)	(1.332)	(1.388)	(2.377)	(1.364)	(2.892)	(3.303)
	[10.145]	[10.145]	[10.145]	[10.145]	[10.145]	[10.145]	[10.145]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	15,092	15,092	15,092	15,092	15,092	15,092	15,092
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for white native males using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers white native males aged 18-65 in years 2005 - 2018.

Table A10: Impact of DACA Exposure on Labor Market Outcomes of Black Males

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	0.357	0.373	0.615	-0.495	0.438	-0.392	-1.428
	(0.381)	(0.380)	(0.446)	(0.759)	(0.382)	(0.890)	(1.389)
	[0.529]	[0.529]	[0.529]	[0.529]	[0.529]	[0.529]	[0.529]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.482	0.532	0.494	-0.473	0.500	-0.711	-1.518
	(0.363)	(0.366)	(0.422)	(0.698)	(0.359)	(0.815)	(1.312)
	[0.641]	[0.641]	[0.641]	[0.641]	[0.641]	[0.641]	[0.641]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	0.390	0.405	0.137	0.009	0.361	-0.581	-0.339
	(0.306)	(0.314)	(0.375)	(0.555)	(0.309)	(0.644)	(0.903)
	[0.182]	[0.182]	[0.182]	[0.182]	[0.182]	[0.182]	[0.182]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	8.111**	9.153***	10.769***	-8.298	8.620***	-5.473	-7.842
	(3.368)	(3.477)	(3.885)	(6.475)	(3.323)	(7.094)	(11.744)
	[8.306]	[8.306]	[8.306]	[8.306]	[8.306]	[8.306]	[8.306]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	14,936	14,936	14,936	14,936	14,936	14,936	14,936
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for black native males using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers black native males aged 18-65 in years 2005 - 2018.

Table A11: Impact of DACA Exposure on Labor Market Outcomes of White DACA-ineligible Immigrant Males

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	1.015***	1.102***	1.383***	1.481**	1.037***	1.329	-0.077
	(0.362)	(0.378)	(0.488)	(0.687)	(0.385)	(0.882)	(1.187)
	[0.793]	[0.793]	[0.793]	[0.793]	[0.793]	[0.793]	[0.793]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	0.614*	0.704**	0.677	0.514	0.562	0.077	-1.780*
	(0.323)	(0.347)	(0.442)	(0.606)	(0.352)	(0.767)	(1.035)
	[0.852]	[0.852]	[0.852]	[0.852]	[0.852]	[0.852]	[0.852]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.466**	-0.463**	-0.829***	-1.084**	-0.518**	-1.352**	-1.704**
	(0.225)	(0.230)	(0.288)	(0.467)	(0.246)	(0.586)	(0.721)
	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]	[0.070]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	5.176*	5.708*	6.611*	4.866	4.191	-0.750	-10.577
	(2.934)	(3.132)	(3.934)	(5.358)	(3.201)	(6.656)	(9.295)
	[9.837]	[9.837]	[9.837]	[9.837]	[9.837]	[9.837]	[9.837]
Clusters	1,078	1,078	1,078	1,078	1,078	1,078	1,078
Observations	14,668	14,668	14,668	14,668	14,668	14,668	14,668
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

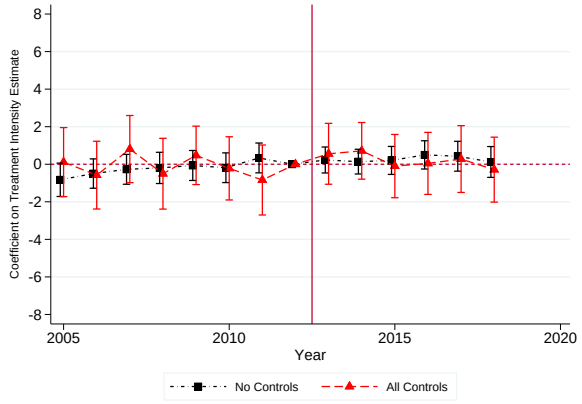
Note: Results report the labor market effects of exposure to DACA-eligible immigrants for DACA-ineligible, non-citizen white immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers DACA-ineligible, non-citizen white immigrant males aged 18-65 in years 2005 - 2018.

Table A12: Impact of DACA Exposure on Labor Market Outcomes of Hispanic DACA-ineligible Immigrant Males

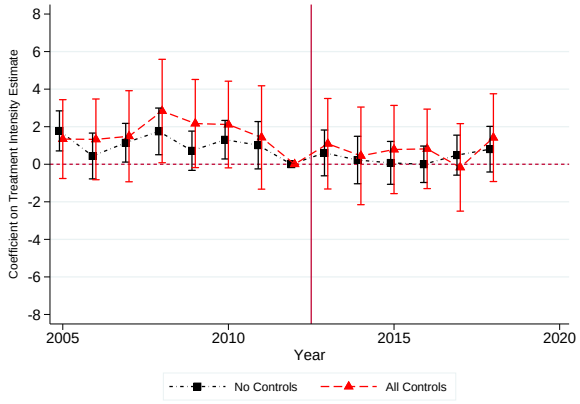
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Working							
DACA Status Ratio x Post-2012	-0.048	0.167	0.237	1.017*	0.126	1.097	0.667
	(0.352)	(0.375)	(0.469)	(0.556)	(0.394)	(0.771)	(1.219)
	[0.809]	[0.809]	[0.809]	[0.809]	[0.809]	[0.809]	[0.809]
Panel B: In Labor Force							
DACA Status Ratio x Post-2012	-0.346	-0.200	-0.168	0.681	-0.229	0.774	0.825
	(0.322)	(0.334)	(0.432)	(0.517)	(0.364)	(0.657)	(1.038)
	[0.867]	[0.867]	[0.867]	[0.867]	[0.867]	[0.867]	[0.867]
Panel C: Unemployed							
DACA Status Ratio x Post-2012	-0.322	-0.425*	-0.446*	-0.300	-0.398*	-0.267	0.498
	(0.208)	(0.229)	(0.266)	(0.404)	(0.222)	(0.544)	(0.701)
	[0.068]	[0.068]	[0.068]	[0.068]	[0.068]	[0.068]	[0.068]
Panel D: Asinh(Income)							
DACA Status Ratio x Post-2012	-3.414	-2.820	0.117	2.342	-2.804	4.128	2.527
	(2.971)	(3.093)	(4.107)	(4.659)	(3.252)	(5.925)	(9.035)
	[9.628]	[9.628]	[9.628]	[9.628]	[9.628]	[9.628]	[9.628]
Clusters	1,076	1,076	1,076	1,076	1,076	1,076	1,076
Observations	13,979	13,979	13,979	13,979	13,979	13,979	13,979
Great Recession Shock x Time Controls		X				X	X
Education Level x Time Controls			X			X	X
Race/Ethnicity x Time Controls				X		X	X
Poverty x Time Controls					X	X	X
FB x Time Controls							X

Note: Results report the labor market effects of exposure to DACA-eligible immigrants for DACA-ineligible, non-citizen Hispanic immigrants using a difference-in-differences with continuous treatment regression. "Treatment" in all panels is the degree of exposure to DACA-eligible immigrants as described in the text. Each panel displays the treatment effect coefficient for the indicated dependent variable. Column 1 presents basic difference-in-differences results with no additional controls. Column 2 controls for Great Recession severity in a CPUMA. Column 3 controls for average education levels in a CPUMA. Column 4 controls for share black and share Hispanic in a CPUMA. Column 5 controls for the share in poverty in a CPUMA. Column 6 contains all previously mentioned controls. Column 7 additionally controls for the share foreign born in a CPUMA. Observations are at the CPUMA-year level and standard errors are clustered by CPUMA in parentheses. Data covers DACA-ineligible, non-citizen Hispanic immigrant males aged 18-65 in years 2005 - 2018.

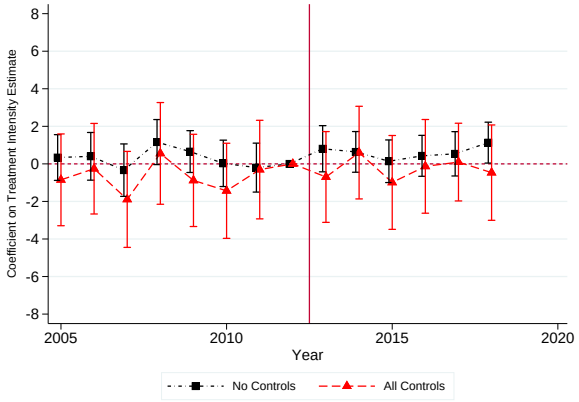
Figure A1: Estimated Impact of DACA Exposure on Natives' Labor Force Participation by Skill and Age



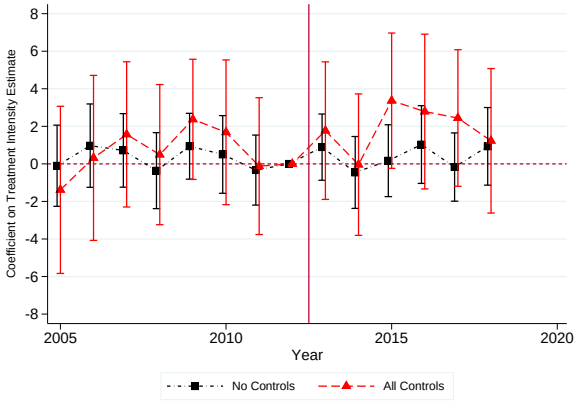
(a) Low-skill, young



(b) Low-skill, old



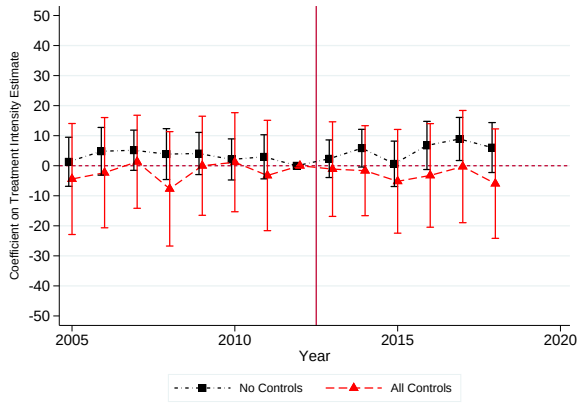
(c) High-skill, young



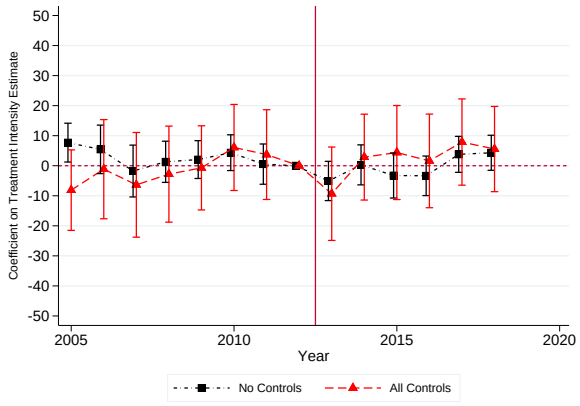
(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on natives' labor force participation by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers male natives in the various age/skill categories from 2005-2018.

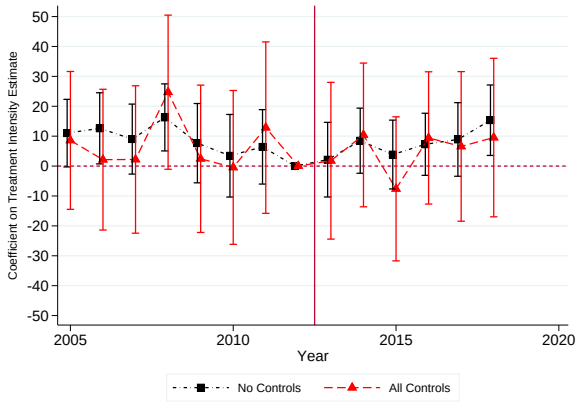
Figure A2: Estimated Impact of DACA Exposure on Natives' Income by Skill and Age



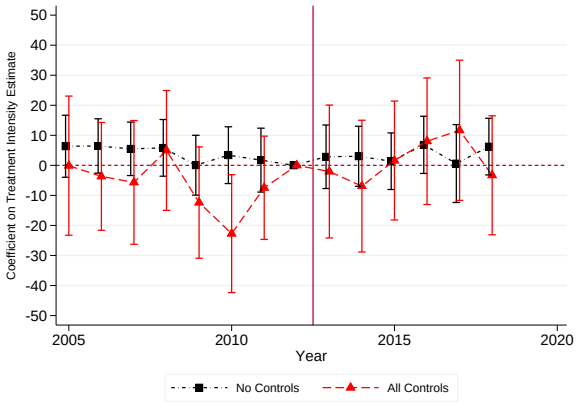
(a) Low-skill, young



(b) Low-skill, old



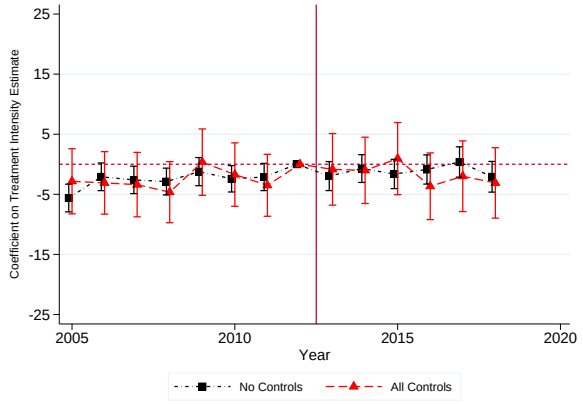
(c) High-skill, young



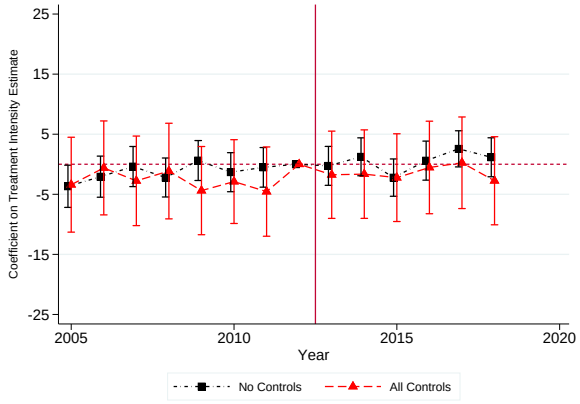
(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on the inverse hyperbolic sine of natives' income by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers male natives in the various age/skill categories from 2005-2018.

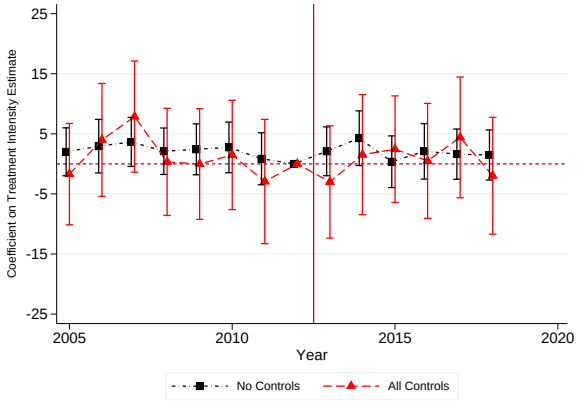
Figure A3: Estimated Impact of DACA Exposure on DACA-ineligible Immigrants' Labor Force Participation by Skill and Age



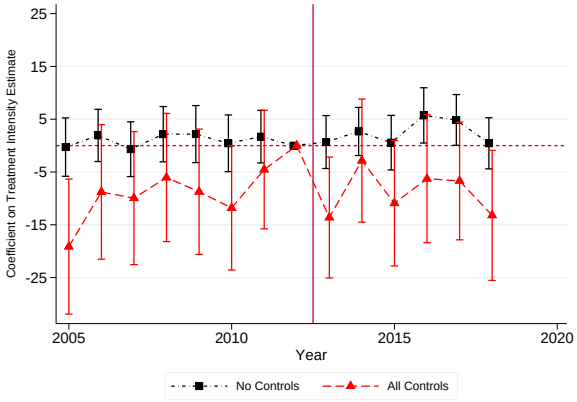
(a) Low-skill, young



(b) Low-skill, old



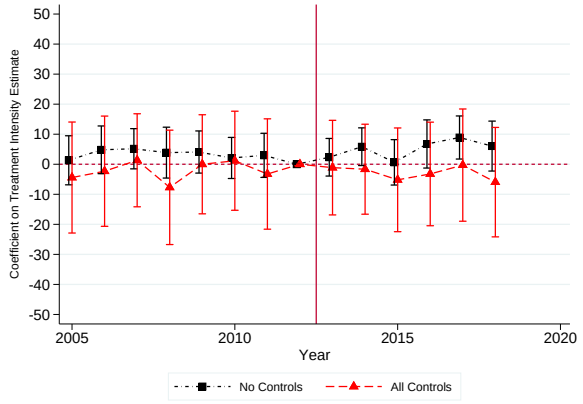
(c) High-skill, young



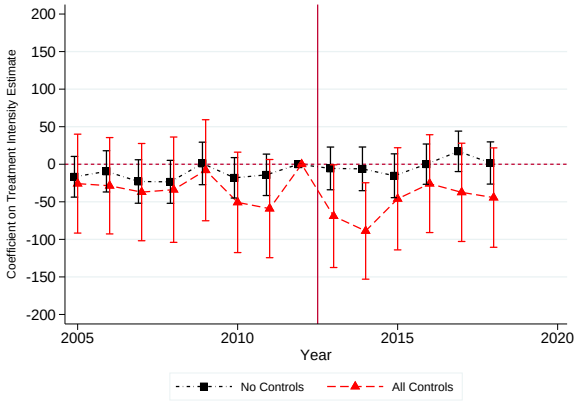
(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on DACA-ineligible, non-citizen immigrants' labor force participation by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill categories from 2005-2018.

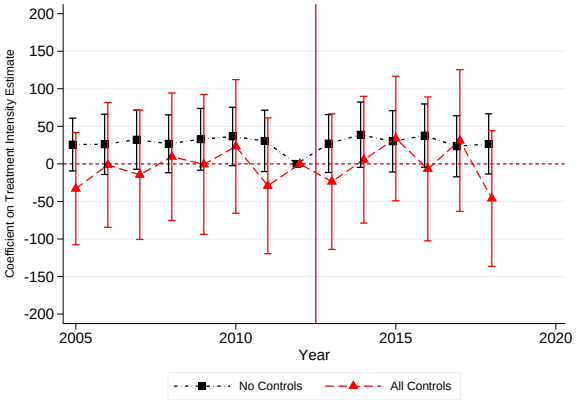
Figure A4: Estimated Impact of DACA Exposure on DACA-ineligible Immigrants' Income by Skill and Age



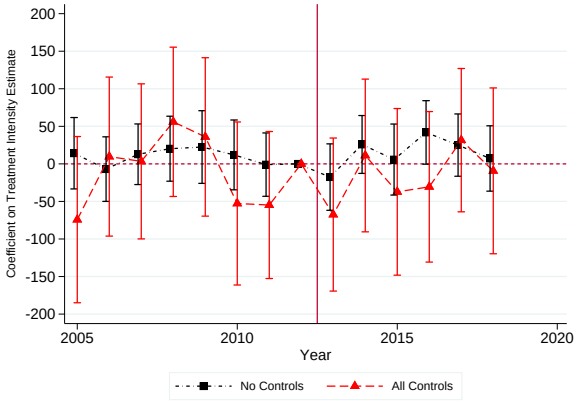
(a) Low-skill, young



(b) Low-skill, old



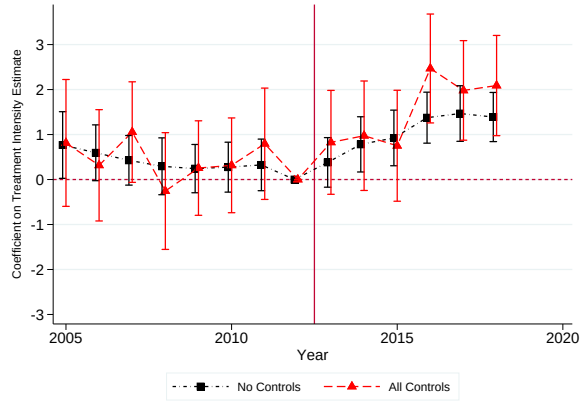
(c) High-skill, young



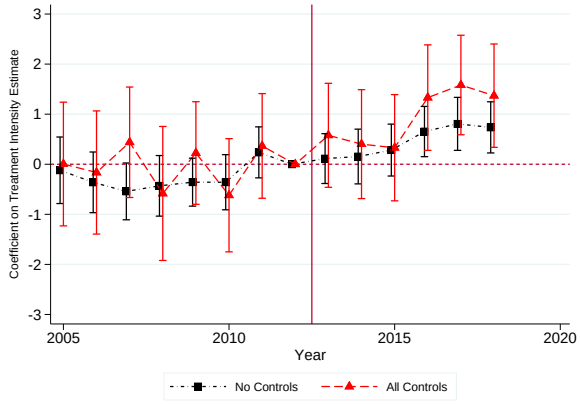
(d) High-skill, old

Note: This figure shows the effect of exposure to DACA-eligible immigrants on the inverse hyperbolic sine of DACA-ineligible, non-citizen immigrants' income by skill and age group. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Low-skill refers to individuals with less than a four-year degree and high-skill refers to individuals with a four-year degree and more. Young refers to individuals aged 30 and below and old refers to individuals aged 55 and above. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers DACA-ineligible, non-citizen male immigrants in the various age/skill categories from 2005-2018.

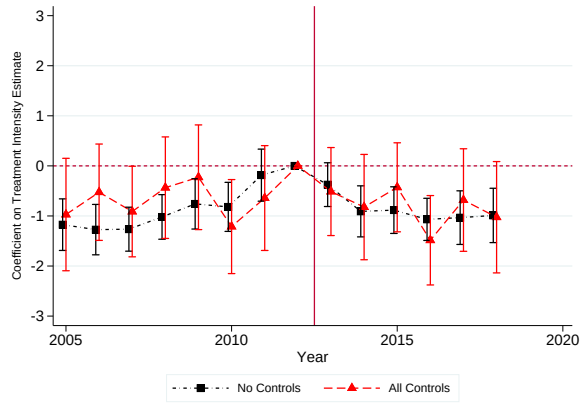
Figure A5: Estimated Impact of DACA Exposure on Labor Market Outcomes of White Natives



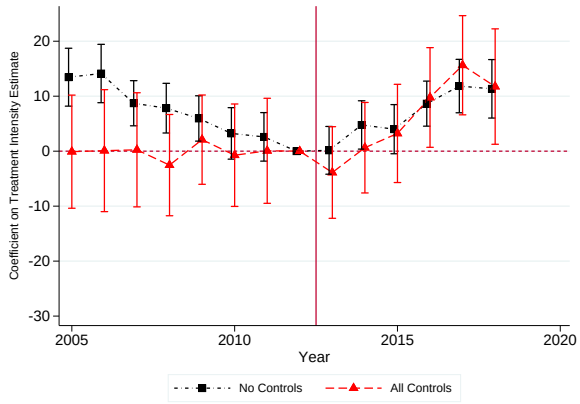
(a) Working



(b) Labor Force Participation



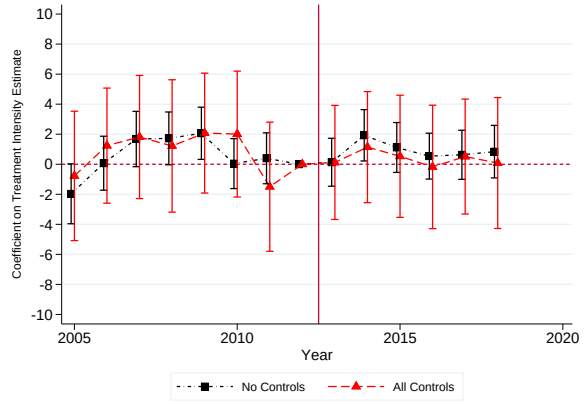
(c) Unemployment



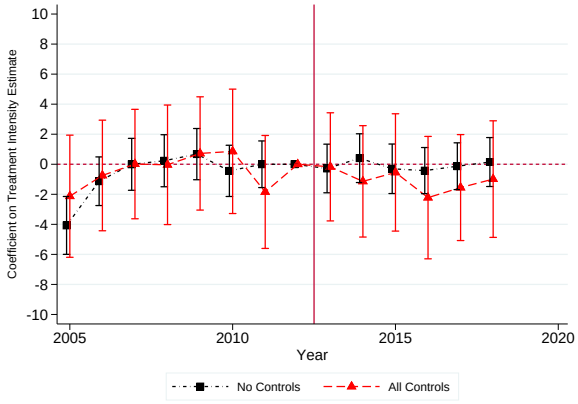
(d) Asinh(Income)

Note: This figure shows the effect of exposure to DACA-eligible immigrants on white male natives' likelihood of working, labor force participation, and unemployment. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers white male natives aged 18-65 from 2005-2018.

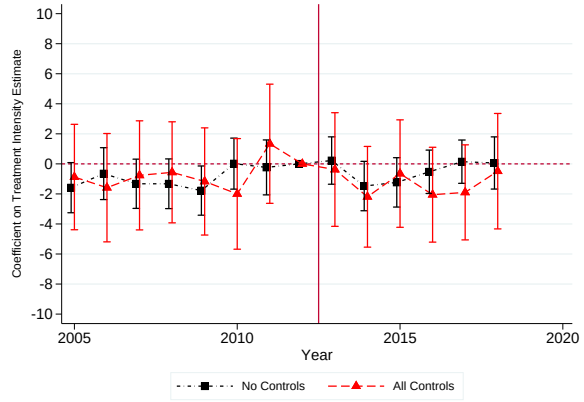
Figure A6: Estimated Impact of DACA Exposure on Labor Market Outcomes of Black Natives



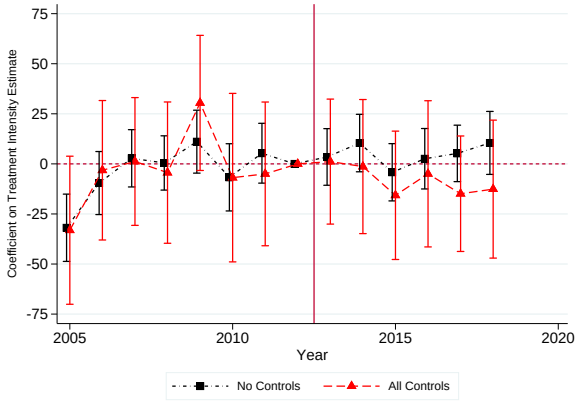
(a) Working



(b) Labor Force Participation



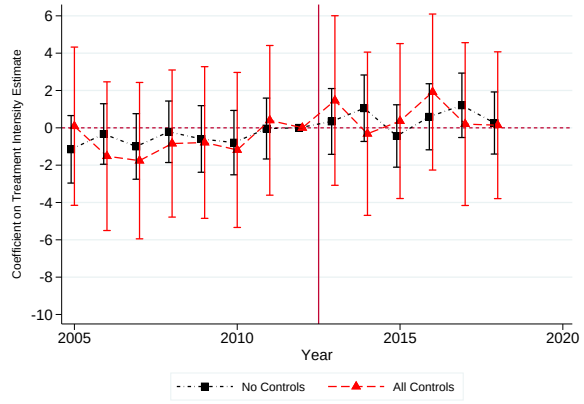
(c) Unemployment



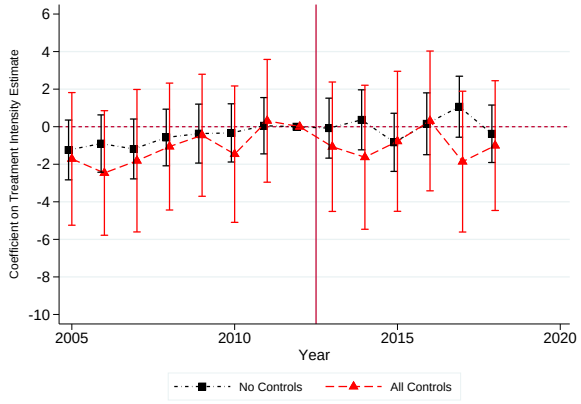
(d) Asinh(Income)

Note: This figure shows the effect of exposure to DACA-eligible immigrants on black male natives' likelihood of working, labor force participation, and unemployment. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers black male natives aged 18-65 from 2005-2018.

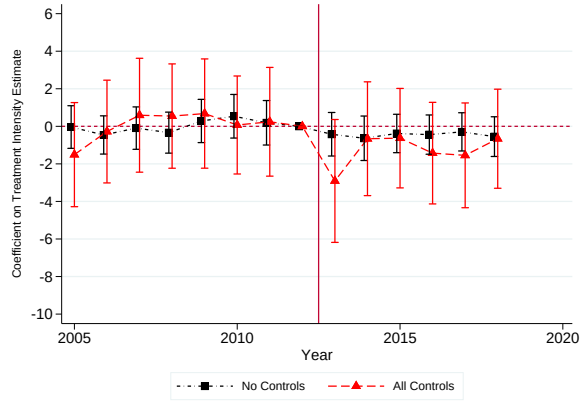
Figure A7: Estimated Impact of DACA Exposure on Labor Market Outcomes of White DACA-ineligible Immigrants



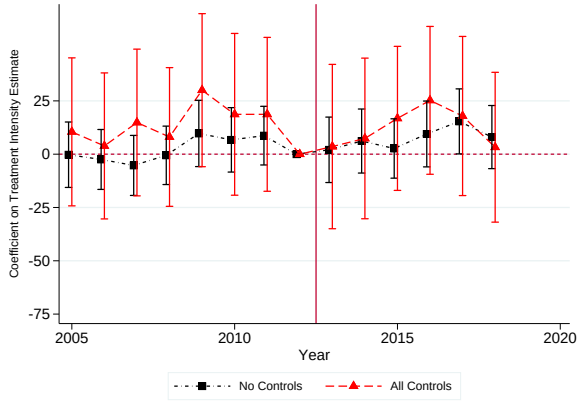
(a) Working



(b) Labor Force Participation



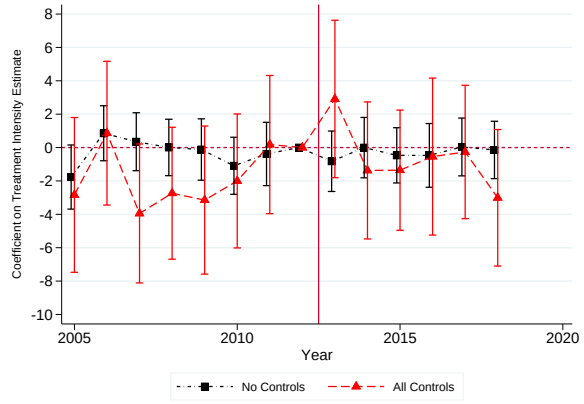
(c) Unemployment



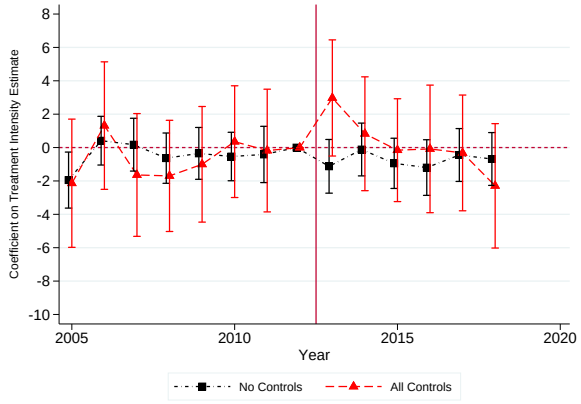
(d) Asinh(Income)

Note: This figure shows the effect of exposure to DACA-eligible immigrants on white male DACA-ineligible, non-citizen immigrants' likelihood of working, labor force participation, and unemployment. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers white male DACA-ineligible, non-citizen immigrants aged 18-65 from 2005-2018.

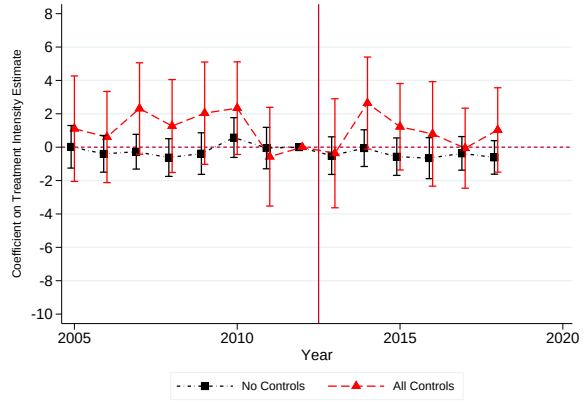
Figure A8: Estimated Impact of DACA Exposure on Labor Market Outcomes of Hispanic DACA-ineligible Immigrants



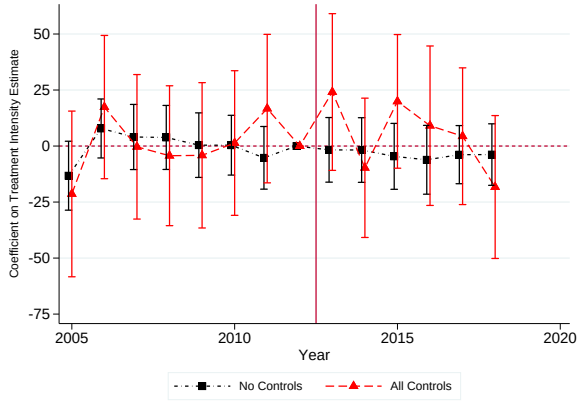
(a) Working



(b) Labor Force Participation



(c) Unemployment



(d) Asinh(Income)

Note: This figure shows the effect of exposure to DACA-eligible immigrants on Hispanic male DACA-ineligible, non-citizen immigrants' likelihood of working, labor force participation, and unemployment. The estimating equation is Equation 2. The black/square lines represent a model with no controls and the red/triangle lines represent the preferred specification with controls for Great Recession severity, education, demographics, and poverty. Observations are at the CPUMA-year level. Standard errors are clustered by CPUMA and 2012 is the base year. Bands around each point represent the 95% confidence interval for each coefficient. The solid red line between 2012 and 2013 represents when DACA became available. Data covers Hispanic male DACA-ineligible, non-citizen immigrants aged 18-65 from 2005-2018.