

The Effects of Deferred Action for Childhood Arrivals on the Educational Outcomes of Undocumented Students: Evidence from a Large Public University

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In response to the U.S. Congress' failure to pass the federal DREAM Act—which would have granted U.S. citizenship to immigrants who arrived in the U.S. as children—President Obama enacted the Deferred Action for Childhood Arrivals (DACA) on June 15, 2012, through an executive order. DACA was intended to be a stop-gap measure, designed to allow youth who arrived before their 16th birthday to work legally on a temporary basis, until Congress could pass comprehensive immigration reform¹. DACA offered temporary relief from deportation, two-year work permits and temporary Social Security numbers for eligible undocumented youth. Although DACA does not provide a pathway to legal permanent status, it offers the potential to improve the economic incorporation and the social mobility of eligible undocumented youth. Estimates show that within the first year of implementation, about 61% of those immediately eligible for DACA applied, and over 98% of applications were approved (Wong et al. 2013). Since 2012, over 728,000 applicants have been approved out of an estimated 1.16 million who are eligible to apply.

Preliminary evidence suggests that the policy has improved the economic conditions of DACA recipients. DACA recipients are more economically integrated because they are more likely to open bank accounts and hold credit cards compared to DACA-ineligible undocumented immigrants (Gonzales, Terriquez and Ruszczyk 2014). DACA increases the labor force participation of DACA recipients (Amuedo-Dorantes and Antman 2016a; Pope 2016) and reduces the poverty rate of households headed by DACA-eligible immigrants (Amuedo-Dorantes and Antman, 2016b).

The effects of DACA on educational attainment are still uncertain. We know of only two existing studies that examine the effect of DACA on schooling outcomes. Analyzing the American

¹ The requirements for DACA eligibility include: (1) being under the age of 31 as of June 15, 2012, (2) arrival in the U.S. before one's 16th birthday, (3) high school graduation or GED, and (4) no criminal record.

Community Survey, Pope (2016) finds that DACA increases the probability of employment but has no effect on college enrollment among DACA-eligible youth. In contrast, using the Current Population Survey, Amuedo-Dorantes and Antman (2016) find that DACA increases the probability of employment among DACA-eligible youth but reduces their college enrollment. Both studies are limited because they: (1) must infer legal status by assuming all foreign-born non-citizens are undocumented, (2) do not consider other schooling outcomes such as graduation rates and academic performance and (3) do not consider how the effect of DACA might vary by individuals' gender, race and ethnicity, and academic ability.

This study uses administrative data on students attending a large, public university to estimate the effect of DACA on the schooling outcomes². A key feature of the data is the ability to accurately identify legal status. The university is located in one of 18 states that offer in-state tuition to undocumented students who reside in the state. To receive in-state tuition, undocumented students must submit notarized affidavits attesting to their legal status. Undocumented students have a large financial incentive to report their legal status because in-state tuition is substantially lower than out-of-state tuition³.

We use regression discontinuity design to estimate the causal effect of DACA on graduation, academic performance and credit completion. We consider heterogeneous treatment effects of DACA by students' ability, gender, race/ethnicity and type of institution (community colleges versus 4-year colleges). Our preliminary results show that DACA reduces the educational attainment of undocumented students. We show that DACA increases dropout rates of undocumented students by nearly 3-percentage points, with larger effects in 4-year colleges relative to 2-year colleges.

² Because of data confidentiality agreements, we cannot disclose the identity of the institution at this time.

³ In-state tuition at four-year colleges is \$6,330 per year versus \$16,800 per year for out-of-state residents. In-state tuition at community colleges is \$4,800 versus \$9,600 for out-of-state residents.

Deferred Action for Childhood Arrivals and Higher Education

There are two potential effects of DACA on the educational achievement of undocumented college students. On the one hand, DACA has the potential to increase college enrollment, academic performance and graduation by increasing potential returns to education and allowing DACA-eligible students to legally work part-time. Eligible youth who may have otherwise dropped out of high school or opted out of attending college because they saw no gain to pursuing education may instead be motivated to enroll in college. DACA may motivate the academic performance of undocumented students if the extension of legal work options increases the potential returns to education. Additionally, DACA could improve retention and increase enrollment by allowing DACA-eligible students legal part-time work to help finance college expenses.

On the other hand, DACA could have negative effects on educational attainment because it increases the opportunity costs of college attendance but does not do enough to raise the potential returns to education to offset these opportunity costs. DACA increases the opportunity costs of attending college because DACA eligible youth can now legally work. In fact, DACA eligibility may mean that undocumented youth who obtain work authorizations become the sole family member who can work legally. Therefore, DACA may incentivize DACA-eligible youth to seek employment and forgo college attendance. Second, while renewable work permits may increase the potential returns to education, they may not incentivize college attendance enough. DACA is a temporary measure, and there are no guarantees that the temporary legal status of DACA recipients will be extended in the future. Given this unclear timeframe, it may make more sense to maximize earnings rather than to invest in higher education. In addition, a major drawback to DACA is that it makes no changes to professional licensing regulations. Today, nearly 30% of all jobs in the United States require professional licenses. For example, the New York State Department of Labor lists at least 130 occupations that require licenses, including occupations such as: barber, cosmetologist, dental

hygienist, welder, social worker, and teacher. Nearly all have strict legal status requirements that bar undocumented students from applying. Licensing regulations prevent most DACA recipients from gaining employment in the types of occupations that have been the traditional engines for immigrant mobility (i.e., nursing, medical assistants, teaching, law enforcement). In this sense, DACA may have the unintentional consequence of increasing employment but reducing investments in human capital.

The effects of DACA on educational outcomes may also vary across individuals. For example, high-achieving students are more motivated and more likely to graduate college than lower achieving students (Walberg and Tsai, 1983; Bailey, Jaggar and Jenkins 2015). Thus, DACA may induce low-achieving undocumented youth to leave school early to seek work options. But at the same time, DACA may motivate high-achieving students to invest in their education for the hope of better employment options after graduation. Furthermore, recent ethnographic work demonstrates that undocumented youth face gendered expectations regarding work and family obligations (Gonzales 2015). These studies show that greater pressure is placed on male youth to enter the labor force to help support the family. This may leave female undocumented youth relatively more freedom to pursue higher education. Alternatively, women might be expected to put family obligations, such as caring for younger siblings or grandparents ahead of their own educational aspirations. In either case, DACA may have differential effects by gender.

Data and Measures

We analyze administrative data from one of the largest public university systems in the country. This university is set in a major metropolitan area and educates over 260,000 degree seekers across 18 undergraduate campuses. Administrative records track each entry cohort of students since the fall of 1999 and data collection is currently ongoing. We analyze entering cohorts from fall 1999 to fall of 2015.

The data are well-suited for the project for several reasons. First, the institution spans the range of selectivity. Seven 2-year community colleges are open access, with the sole admission requirement being the possession of a high school diploma or GED equivalent. Eleven 4-year senior colleges offer bachelor's degrees and vary in terms of admission selectivity. Thus, our analysis can consider the broad spectrum of institutional selectivity and institutional type (2-year vs. 4-year colleges). Second, the data reliably identify documentation status. Upon enrollment, students are asked to self-report as U.S. citizens, legal permanent residents, temporary visa holders, refugees, or undocumented immigrants. Students must submit documentation to validate their own self-reports; those who fail to provide documentation are categorized as undocumented. Moreover, in order to qualify for in-state tuition rates, undocumented students must provide a notarized affidavit stating they will pursue steps to obtain legal residency if such options become available. Using data on self-reported race and country of birth, documentation status can be cross-classified with country of origin and race/ethnicity to compare undocumented students with co-ethnic students who are legal permanent residents (LPRs), naturalized citizens, or U.S. native-born. Finally, the data track all degree-seeking students as long as they are enrolled and include transfer and re-entry, and outcomes like GPA, time to graduation, credit completion, major choice, and course-taking patterns.

Methodology

As a first step to explore the effect of DACA on schooling, we estimate individual fixed-effect regressions and plot the gap in dropout rates between undocumented and documented students (i.e., citizens and LPRs) for each year from 2007 to 2014. Specifically, we estimate the following linear probability model:

$$\text{Drop}_{itc} = \alpha_i + \alpha_c + \alpha_t + \beta_t \text{Year}_t * \text{Undoc}_i + \varepsilon_{itc} \quad (1)$$

The dependent variable Drop_{itc} represents a dummy variable indicating whether the individual i in cohort c in calendar year t is enrolled in school (dropout). α_i , α_c , and α_t are fixed-effects of the

individual, cohort and time, respectively. We include a statistical interaction between year dummies, Year_t , and a dummy variable for undocumented status at time of enrollment, Undoc_i . β_t indicates the difference in dropout rate between undocumented students and their legal status counterparts for every year t .

Timing of Policy Reform

Understanding the date of implementation of the DACA program and when one should expect to see effects on academic outcomes is critical. On June 15, 2012, President Barack Obama announces the DACA program. Applications begin being accepted on August 15, 2012 but very few cases were approved until after October 2012 with the vast majority of approvals occurring after December 2012 (Batalova et al. 2013). Figure 1 shows the number of approved DACA cases from when applications are first accepted (August 12, 2012) to July 2013. For college students, this means that DACA is announced during their 2012 summer break. The vast majority of DACA applicants in college would have been approved during or after their spring 2013 semester. This means that any anticipated effect of DACA should be observed in 2013 and beyond.

Preliminary Results

A discontinuous increase or decrease in the undocumented-documented gap following the implementation of DACA would offer evidence that DACA significantly affects the educational attainment of undocumented students. Figure 1 presents results for 2-year colleges and Figure 2 presents results for 4-year colleges. Two important results are evident: (1) a discontinuous increase occurs in 2013, and (2) this increase is larger for 4-year colleges than for 2-year colleges. The discontinuity in 2013 makes sense because while DACA was announced in June 2012, applications were not accepted until August 2012 and the vast majority of applications were not approved until after December 2012. (U.S. Citizenship and Immigration Services, 2013). This means the anticipated effect of DACA on retention should be observed in 2013, once the majority of DACA applicants

received notice of their approval. Whereas the increase in dropout rates from 2012 to 2013 at 2-year colleges is relatively small (about a 1-percentage point increase), the increase in dropout at 4-year colleges is larger—about a 3-percentage point increase.

Overall, our preliminary results suggest that DACA may have a negative effect on the educational attainment of undocumented students. The reasons motivating these decisions are yet unknown but one likely possibility is that DACA recipients are leaving school to work. In a related paper using the same data, Hsin and Reed (2016) show that even though undocumented students are more positively selected (i.e., they have higher high school grade-point averages and higher math test scores than citizens and legal permanent resident college students), they have higher dropout rates, suggesting that lack of legal status negatively affects educational attainment. DACA may incentivize undocumented students who are already at the margin to leave school to work. In many families, DACA-recipients students may be the only family members who can legally work thereby placing additional pressures on them to leave school to work to support the family.

Future work

Future work will examine other outcomes including college grade-point average. We will also consider whether DACA is used by some students to work to finance college attendance. To do this, we will examine the effect of DACA on full-time versus part-time attendance. Finally, our study will examine whether the effects of DACA on educational outcomes vary across individuals (e.g., by ability, gender, and race and ethnicity). For example, high-achieving students are more motivated and more likely to graduate college than lower-achieving students (Walberg and Tsai, 1983; Bailey, Jaggard and Jenkins 2015). Thus, DACA may induce low-achieving undocumented youth to leave school early to seek work options and motivate high-achieving students to continue investing in human capital. Furthermore, recent ethnographic work demonstrates that undocumented youth face gendered expectations regarding work and family obligations (Gonzales 2015). These studies show

that greater pressure is placed on male youth to enter the labor force to help support their families. This may leave female undocumented youth relatively more freedom to pursue higher education. Alternatively, women might be expected to put family obligations, such as caring for younger siblings or grandparents, ahead of their own educational aspirations. In either case, DACA may have differential effects by gender.

An important caveat to our identification strategy is “imperfect compliance” or the fact that not all DACA-eligible students apply for DACA. As a result, we cannot interpret discontinuities at time of reform as average treatment effects across all individuals (Lee and Lemieux 2010; Imbens and Lemieux 2008) because only some fraction of undocumented students are DACA-eligible and applied for DACA. We will correct for non-compliance by using a fuzzy regression discontinuity design or fuzzy RDD (Lee and Lemieux 2010; Imbens and Lemieux 2008). Rather than estimating the average treatment effect across all individuals, fuzzy RDD estimates the local average treatment effect (LATE) for the subpopulation of compliers. In this project, fuzzy RDD will isolate the LATE of policy reforms on DACA recipients. Fuzzy RDD achieves this by treating discontinuities at the time of reform as a weighted average treatment effect where weights are directly proportional to the compliance ratio at the time of the reform. We will use statistics from the U.S. Citizenship and Immigration Services (USCIS) on the percentage of DACA-eligible individuals in New York State who actually become DACA recipients to estimate the compliance ratio. LATE will be obtained by scaling discontinuities at time of reform by the compliance ratio. In this way, we can properly estimate the effects of DACA and licensing reforms on undocumented students’ educational outcomes.

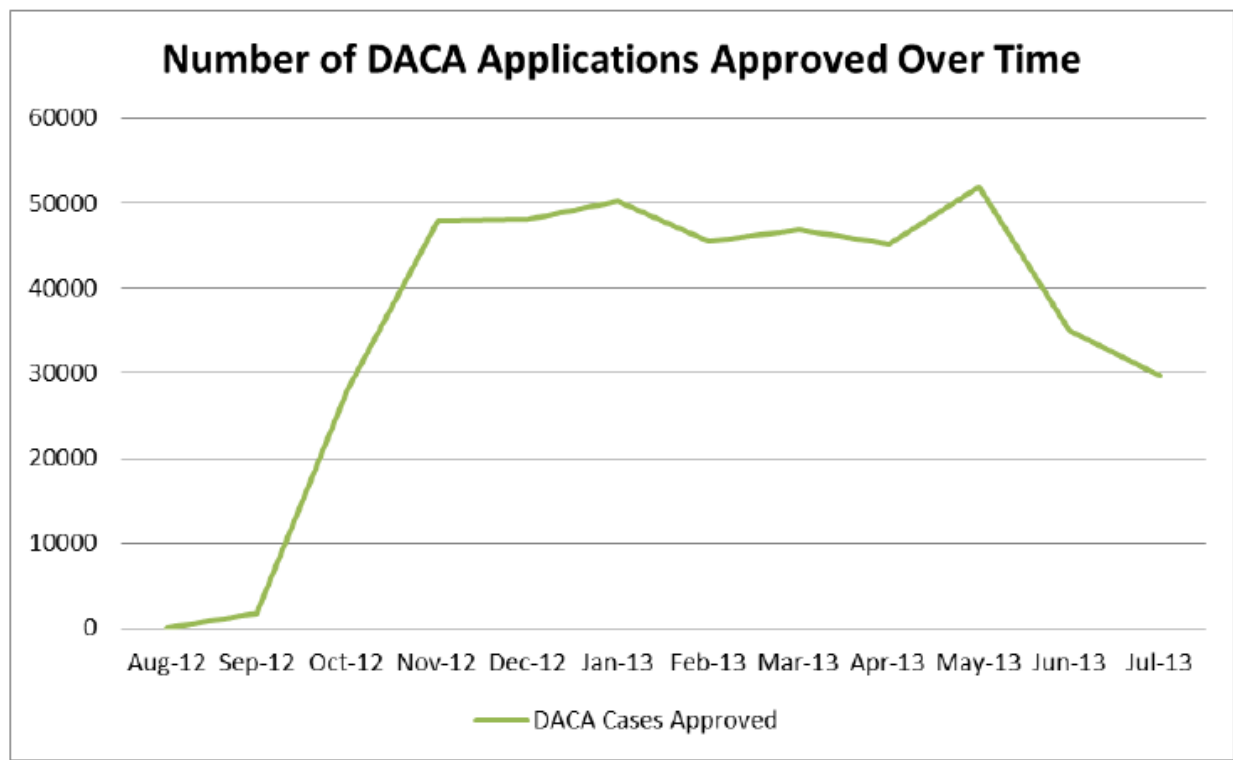
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Tables and Figures

Figure 1. Number of DACA Applications Approved Over Times



Source: Amuedo-Dorantes and Antman (2016)

Figure 2. Estimated Effect of DACA on Dropout Rate

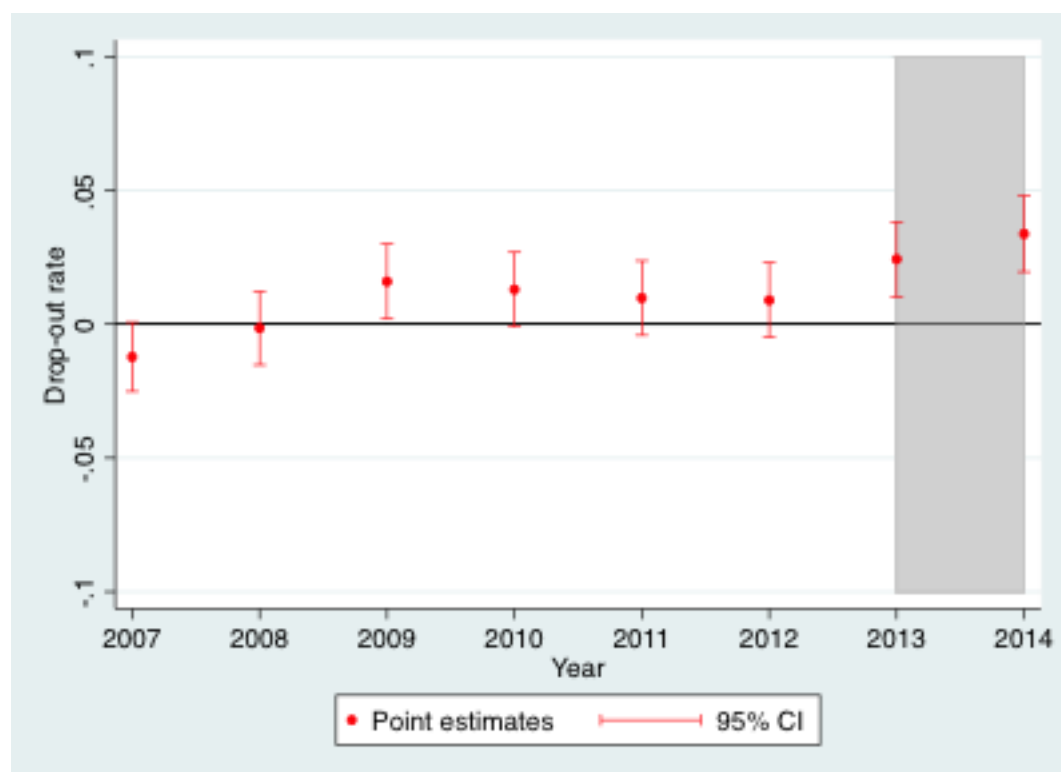


Figure 3. Estimated Effect of DACA on Dropout Rates, 2-year Colleges

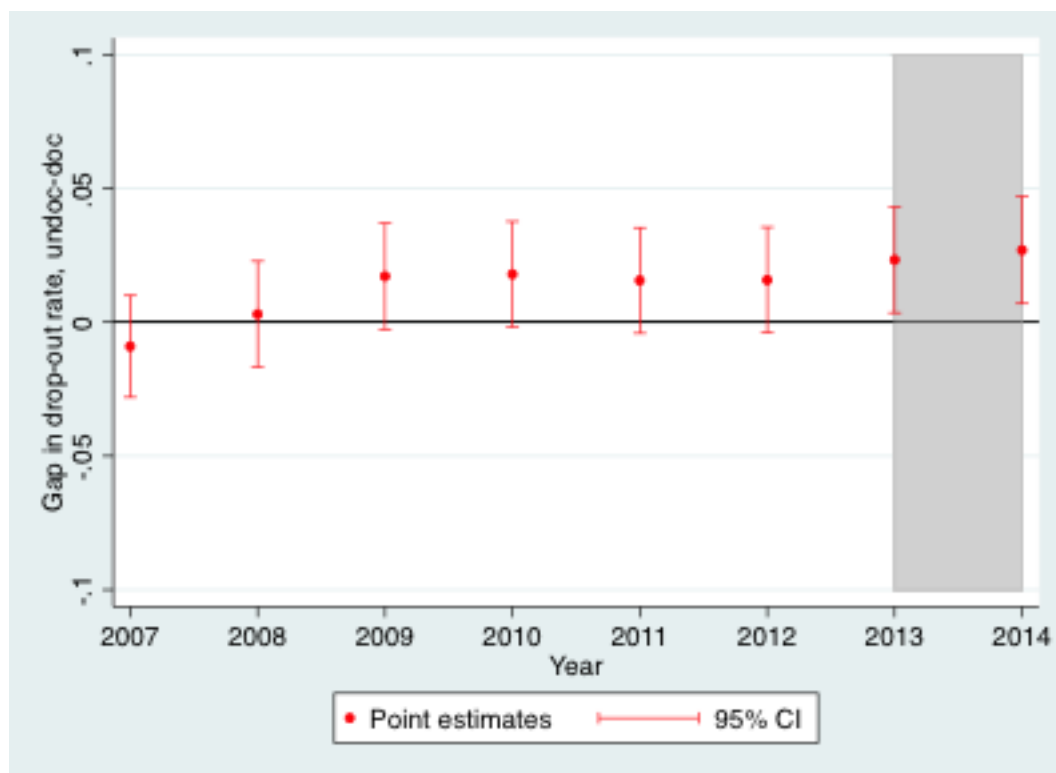


Figure 4. Estimated Effect of DACA on Dropout Rates, 4-year Colleges

