

# A Reason to Wait: The Effect of Legal Status on Teen Pregnancy

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Although teen pregnancy has been on the decline in the United States, it remains among the highest within developed countries (Kearney and Levine, 2012). Hispanics lead this trend, with 70.1 births per 1,000 teens (Kearney and Levine, 2012), and are also more likely to be immigrants and undocumented. Yet, surprisingly the role of legal immigration status (or the absence of it) has yet to be considered as a factor in the literature.

There are multiple reasons why undocumented status could influence the childbearing decisions of teens. The first is through lessened future economic opportunity, which may attenuate the labor market aspirations of young women (Kearney and Levine, 2014). Second, undocumented youth drop out of school earlier (Kuka, Shenhav and Shih, 2019), which could reduce opportunities for learning about contraception and increase time for romantic relationships. Finally, it is sometimes suggested that undocumented women may use birthright citizenship and have children to prevent deportation.

In this paper, we provide the first evidence on the role of legal status in teenage fertility decisions. We begin by documenting that among Hispanics, undocu-

mented immigrants have much higher levels of teenage childbearing than natives or immigrants with legal status. We then identify the causal role of a temporary amnesty by taking advantage of the 2012 enactment of the Deferred Action for Childhood Arrivals program (DACA), which provided two years of legal status for qualified undocumented youth. Our identification relies on a difference-in-differences design comparing eligible and non-eligible teen immigrants.

We estimate that DACA led to a 1.6 percentage point (p.p.) decline in the likelihood of having a teenage birth, which is driven by teens on the margin of a first birth. Moreover, we find suggestive evidence that this shift in behavior may be accounted for by a rise in pregnancy prevention methods among teens, rather than a decline in sexual behavior. Unfortunately our data prevent us from examining pregnancy terminations, which could serve as an additional mechanism.

Our findings provide a new channel by which the availability of legal status can improve the well-being of undocumented youth. This builds on previous literature which shows that DACA increases investment in education (Kuka, Shenhav and Shih, 2019), increase employment and earnings (e.g. Amuedo-Dorantes and Antman, 2017; Pope, 2016) and improve health (Giuntella and Lonsky, 2018; Hainmueller et al., 2017).

Our research enriches past work that has shown links between mandatory schooling

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requirements and fertility decisions (McCrary and Royer, 2011; Black, Devereux and Salvanes, 2008; Geruso and Royer, 2018). Our results show that fertility also responds strongly to the perception of future opportunities. Hence, we provide causal evidence to support earlier claims that the prevalence of teenage births among disadvantaged communities is at least in part a reaction to a lack of incentive to remain in school (Kearney and Levine, 2014, 2012).

### I. Institutional Background

DACA was enacted by executive memorandum in June 2012, and fully in place through September 2017. It affords two main benefits to approved applicants. First, recipients obtain deferral from deportation for two years. Second, recipients are given work authorization through the issuance of a work permit. After two years, recipients may renew benefits (with no cap on the number of renewals).

Individuals must satisfy five main criteria in order to qualify for DACA. These include: (i) no lawful status (ii) under 31 by June 15, 2012; (iii) entered the US before age 16; (iv) continuous residence since June 15, 2007; (v) currently in school or graduated from high school (or GED).<sup>1</sup>

The structure and benefits of DACA each provide disincentives for teenage childbearing. Since DACA requires a high school education, DACA increases the opportunity cost of dropping out of school, and therefore of having a child. On the benefits side, women may delay childbearing in order to take advantage of the work permit. Moreover, legal status would reduce

<sup>1</sup>Applicants may substitute veteran status for the final requirement, but in practice this seems to be atypical (Kuka, Shenhav and Shih, 2019).

the need to have children to take advantage of birthright citizenship.

In Figure 1 we use the American Community Survey (ACS) microdata from IPUMS (Ruggles et al., 2017) to plot the share of Hispanic immigrant young adult females (ages 15 to 20) that are currently childless.<sup>2</sup> We separate immigrants by citizenship to examine the possible role of legal status. It shows that, first, non-citizen teens are roughly 4 to 6 p.p. more likely to have had a child. This implies that Hispanic non-citizens are approximately 50% more likely to have had a child than their citizen counterparts, among whom 6 to 10% have a child. In contrast, immigrant citizens have similar rates of teenage childbearing to U.S.-born Hispanics, who are not included in the figure. Second, the citizen-non-citizen gap in teenage childbearing closes significantly to 2 p.p. after 2012. This coincides with the announcement of DACA.

### II. Empirical Strategy and Data

We use a difference-in-differences (DiD) strategy to identify the impact of DACA on fertility, in an approach that closely follows Kuka, Shenhav and Shih (2019). Specifically, we compare the outcomes of female child migrants that are potentially eligible for DACA (non-citizens) to the outcomes of female child migrants that are ineligible (citizens), and estimate whether the gap in fertility between these groups changes after DACA.

We model:

$$Y_{iagst} = \alpha_0 + \alpha_1 \text{Elig}_g + \alpha_2 \text{Elig}_g \cdot \text{Post}_t + \rho' X_{ig} + \gamma_{st} + \phi_{ag} + \epsilon_{iagst}$$

where  $Y_{iagst}$  is a measure of recent ferti-

<sup>2</sup>We include 20 year old women since the impact of changes in behavior at age 19 are lagged.

ity for youth  $i$  with eligibility status  $g$  that entered the US at age  $a$  residing in state  $s$  in year  $t$ .  $Elig_g$  is an indicator for non-citizens.  $Post_t$  is an indicator for 2012 onward.  $X_{ig}$  are individual controls for age-by-year and year of entry to the US. We include state-by-year and age-of-arrival-by-eligibility fixed effects,  $\gamma_{st}$  and  $\phi_{ag}$ . We address potential pre-existing trends using a strategy discussed in Kuka, Shenhav and Shih (2019), that models linear trends in the pre-DACA period and removes them from the full sample.

We analyze three fertility outcomes in the 2005 to 2015 ACS: any children, number of children in the household, and whether the respondent had a child born in the last year. We focus on a sample of Hispanic teens between the ages of 15 and 20 that arrived in the US by age 10 and by 2007, following Kuka, Shenhav and Shih (2019). This decision minimizes measurement error in eligibility and changes in the composition of the sample over time.

We also examine teenage sexual behavior using Hispanic responses of high school students ages 14 to 18 from the Youth Risk Behavior Surveillance System (YRBSS) data.<sup>3,4</sup> The YRBSS does not collect information on citizenship, so we instead estimate a “collapsed” version of the main estimating equation:

$$Y_{ist} = \alpha + \beta_1 HiShareElig_s \cdot Post_t + \gamma_s + \gamma_t + \epsilon_{st}$$

<sup>3</sup>To obtain state-representative estimates, we obtained data for the 22 states that administered the survey biennially from 2005 to 2015. These include AK, AL\*, AZ\*, AR\*, CT, DE\*, FL\*, KY\*, MD\*, ME, MI, MT, NC\*, ND, NH, NY, OK\*, RI\*, SC\*, TN\*, WV, WY. \* indicates a high share of eligible Hispanics.

<sup>4</sup>Since DACA increases school-going, results are subject to selection bias, which we expect would tend to increase risky behaviors.

where  $HiShareElig_s$  is an indicator for having above-median share eligible in state  $s$  among the Hispanic population ages 14 to 18 between 2005 and 2011. We also control for linear trends as in the ACS.

### III. Results

Panel A of Table 1 shows that DACA led to a large decline in the likelihood of being teenage mother. We find a 1.6 p.p. decline in Hispanic females’ likelihood of having a child in the previous year, a 28% reduction relative to the mean. We note that the 95% confidence interval allows for an effect as small as 0.6 p.p., an 11% effect, which is still an economically meaningful reduction.

This reduction in fertility is concentrated among teens on the margin of a first birth. We find a 1.8 p.p. increase in the likelihood of having zero children, which mirrors the decline in prior year fertility. Scaling this estimate by the gap in Figure 1, this implies that DACA closed approximately half of the gap in teenage fertility between documented and undocumented women.

To examine the sensitivity of the results, Panel B of the table shows estimates when we omit our controls for pre-existing trends. This makes little difference. In results not reported, we also restricted the main analysis to younger samples, ages 15 to 18 (or 19), which produces similar, sometimes more precise, results. We have also experimented with beginning the post-period in 2013, and the results are generally stable, though we lose significant for some samples and specifications.<sup>5</sup>

We have also looked into whether the effects on fertility are concentrated among high-school-aged women. We generally

<sup>5</sup>Since shifts in new conceptions can only appear in 2013, we interpret this as either increased pregnancy terminations or pre-DACA changes in fertility.

do not find a significant impact for older women, ages 20 to 30. This could reflect the fact that high school has an “incapacitation” effect, or the fact that young women respond more to the perception of future opportunities under DACA.

A. *Exploring Reasons for Changes in Fertility with YRBSS*

Table 2 shows the effect of DACA on the sexual behavior of Hispanic high school students ages 15 to 20. DACA led to a 4.8 p.p. decline in unprotected sex among Hispanic high school students, a more than 20% reduction. Among specific pregnancy prevention methods, students report an increase in use of condoms, decrease in IUD’s/shots, and an increase in withdrawal. We find no change in the likelihood of having sex. These results suggest that DACA reduced teen pregnancy through greater attention towards practicing safe sex.

#### IV. Conclusion

Hispanic women have among the highest rates of being teenager mothers. In this paper, we show that within this group, Hispanic non-citizens, many of whom are undocumented, are particularly susceptible to young motherhood. We find that DACA reduced the likelihood of having a teenage birth by 1.6 percentage points, and eliminated roughly half of the gap in teenage childbearing between documented and undocumented women.

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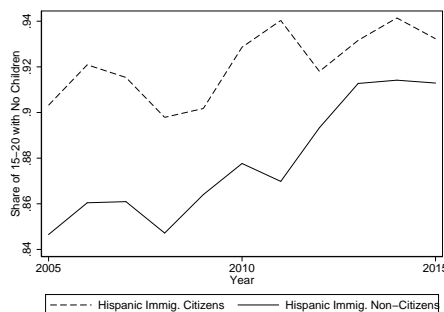


Figure 1. : Likelihood of Having No Children Among Hispanic Youths, by Citizenship Status

ACS 2005–2015: This figure shows the share of Hispanic immigrant citizens and non-citizens between the ages of 15 and 20 that are childless. DACA was enacted in June 2012.

Table 1—: Effect of DACA on Teenage Fertility

	Children		
	Last Year	Zero	Number
<i>A. With Trend</i>			
Elig*Post	-0.016*** (0.005)	0.018** (0.007)	-0.033*** (0.011)
<i>B. Without Trend</i>			
Elig*Post	-0.016*** (0.006)	0.021*** (0.007)	-0.023* (0.012)
Elig Mean	0.057	0.906	0.121
Individuals	30333	30442	30442

ACS 2005–2015: Sample includes Hispanic women ages 15 to 20. Standard errors clustered at the state level. \*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < .01$

Table 2—: Effect of DACA on Pregnancy Prevention and Sexual Behavior

	Last Time Had Sex, Pregnancy Protection:					Had Sex	
	None	Pill	Condom	IUD/Shot	Withdraw/Oth.	Ever	Last 3 Mos.
High Elig.*Post	-0.048** (0.022)	-0.001 (0.017)	0.050*** (0.017)	-0.033*** (0.011)	0.031** (0.012)	-0.009 (0.018)	0.004 (0.020)
Eligible Mean	0.189	0.103	0.543	0.039	0.125	0.470	0.328
Individuals	29332	29332	29332	29332	29332	67913	67100

YRBSS 2005 to 2015: Sample includes Hispanic women ages 14 to 18 who attend high school. Standard errors clustered at the state level. \*  $p < 0.10$  \*\*  $p < 0.05$  \*\*\*  $p < .01$