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Abstract

We obtained data on the age and educational outcomes of nearly 3,000 college students who are DACA recipients—Deferred Action for Childhood Arrivals—and used it to forecast their income in the ensuing decade. We then used this data, along with the income we forecast for DACA recipients not in college, to estimate the total economic and fiscal impact over the next decade of allowing this cohort to remain in the country and legally pursue employment. We estimate that reversing DACA would cost the U.S. economy \$351 billion from 2019 to 2028 in lost income and that the U.S. Treasury would lose \$92.9 billion in tax revenue.

Background

As of our publication date, the status of the recipients of the Deferred Action for Childhood Arrivals—or DACA—has yet to be resolved. DACA provides work authorization and protections from deportations for individuals who were transported to the United States as children and who have since proven themselves to be productive members of society by meeting education benchmarks and having refrained from criminal activity. In October, President Trump announced that he was suspending the program—which was originally provided via an executive order from President Obama—but that he would delay its termination by six months to give Congress sufficient time to pass legislation to replace the executive order. Such legislation has proven elusive.

One argument put forth by those opposed to any renewal is that allowing these immigrants to remain in the country would impose a cost on U.S. taxpayers; a CBO study published in December 2017 estimates that legislation reinstating the legal status of the estimated 800,000 DACA immigrants would cost the federal government \$26 billion over the next ten years.⁴

These results were at odds with our own research published in early 2017.⁵ In that research, we stated that our *a priori* perspective was that cancelling DACA would make it nearly impossible for this cohort to obtain lawful employment and result in a reduction in tax revenues and economic activity in the domestic economy.

We estimated the economic and fiscal impact by extrapolating from related research that estimated the impact of expanding the pool of H-1B visa holders on economic activity.⁶ We compared the demographic characteristics of the H-1B population and the DACA population—in general DACA recipients are younger and a sizeable fraction will likely not complete college. The result is that their income is quite a bit lower than for H-1B holders but it grows at a faster rate. We then estimated income and tax revenue by using the estimates for the H-1B population and adjusting those numbers by the income path and population differences.

We determined that reversing the policy would cost the U.S. economy \$280 billion over a ten-year period, and that the resulting loss of government revenue would amount to roughly \$60 billion in that decade.

A Brief History of DACA

President Barack Obama first established DACA visa executive action in 2012. From 2012 to 2017, roughly 800,000 people received DACA status. While this population could attend most colleges despite their lack of a legal status, the program gave them a temporary work permit and a Social Security number, which allowed them to work as well.

During his presidential campaign, Donald Trump promised to rescind DACA early in his presidency, and in September of 2017, the Attorney General announced that the program was, in fact, being suspended, with DACA recipients given up to a six-month grace period to get their affairs in order. The president challenged Congress to pass its own legislation to protect the status of DACA recipients, and at various times indicated that he felt some empathy for their plight and wanted a humane and reasonable solution of the issue.

This announcement was met with multiple legal challenges from state governments and individuals alike. The U.S. District Court of the Northern District of California has ruled that the reversal of DACA was unlawful, and has ordered the government to continue the program until further notice.

One proposed bill under consideration is the DREAM Act of 2017. The Congressional Budget Office estimated that it would increase budget deficits by approximately \$26 billion over the next decade.⁷ The rationale given for this result is that immigrants without work permits pay certain taxes, most notably payroll taxes, but cannot claim benefits. By granting them legal status these workers become eligible for various benefit programs and Social Security but without paying much more in federal income taxes.

The DACA Population

To understand the economic impact of reversing DACA it helps to understand what distinguishes DACA recipients from other cohorts of legal and illegal immigrants. Since the DACA population grew up in the United States, they more closely resemble native-born Americans and second-generation immigrants more than first-generation immigrants. Having experienced the American school system and a peer group comprised mainly of Americans, the difficulties presented by language barriers, culture shock, and other obstacles to assimilation have dissipated, thus affording DACA recipients more opportunities for economic success than immigrants as a whole.

Moreover, DACA recipients must necessarily be free from criminal activity, as well as have the ability to enroll and remain in some sort of post-secondary education in order to qualify for the program, leaving us with a cohort that has largely performed well in school and stayed out of trouble.

Analysis done by the Center for American Progress found that DACA recipients tend to perform well in post-secondary education and have lower attrition rates than their peers.⁸ A primary reason for this is that the opportunity cost for a DACA student to leave school before completion is higher than for a native student: it is more difficult for DACA students to procure financial aid or scholarships and it becomes nearly impossible to do such a thing if a student leaves school for a spell.

The Migration Policy Institute (MPI) estimated that in 2014 nearly half of the DACA-eligible population who have completed a high school degree had no further education, with an additional 29 percent enrolled in college, 16 percent having completed some post-secondary education, and only 7 percent with college degrees.⁹ Since DACA enrollment only began in

2012, this paucity of college graduates is understandable; more impressive is the surge in college enrollment. For the rest of the U.S. population, approximately 60 percent of high school graduates attended some sort of post-secondary institution and one third of the population eventually obtained a college degree.

These numbers would presumably have been even higher had MPI been able to look only at DACA enrollees. They estimated that in 2016, only 68 percent of the DACA-eligible population enrolled in the program. Clearly, those with at least some post-secondary education have a greater incentive to apply for DACA status than the average DACA-eligible person, since that status opens up legal employment opportunities that substantially increase with education. Therefore, we conclude that those with DACA *status* have a higher college enrollment rate as compared to the entire population of DACA-eligible unlawful immigrants.¹⁰ From that, we assume that the college-enrollment rate among DACA enrollees is around 40 percent in 2014, about a third higher than for all DACA-eligibles, which would in turn suggest that by 2019 the current DACA-enrolled population will be--roughly--evenly divided between those with only a high school degree, those with some post-secondary education, those currently in college, and those with college degrees.¹¹

Methodology

Estimating the economic production and tax revenues that DACA enrollees are likely to generate over the next decade entails three steps. First, we needed to generate a profile of the DACA-eligible population over time, as its members move from high school either directly into the workforce, or through post-secondary education and then into the workforce. That profile needs to include reasonable transition probabilities that would estimate both high school and college drop out rates that are consistent with the patterns observed in the data.

Second, we needed to estimate reasonable age-earnings profiles for three groups of DACA-eligible individuals: those projected to have only high school degrees, those projected to have some college or other post-secondary education but no degree, and those projected to complete college. Finally, we needed to estimate how many of those DACA-eligible individuals would in fact apply for and be approved for DACA status.

DACA-eligible Workforce Entry

We used Migration Policy Institute research on the characteristics and numbers of the DACA-eligible population to estimate the distribution of educational attainment for this population.¹² Using the Hispanic dropout rates in the Census Department's CPS Historical Time Series Tables on School Enrollment, we generated a plausible pattern of DACA-eligible high school enrollment, which gradually tapered from 98,000 freshmen in 2012 to 8,000 freshmen in 2023.¹³ We then assumed that 35 percent of these high school graduates would move directly into the workforce. MPI estimated that there were 396,000 DACA-eligible high school graduates in 2014 who were not pursuing additional education, which would then imply that 309,000 DACA-eligible, unlawful immigrants had already graduated from high school by 2011.

The remaining high school graduates were divided between college enrollment (50 percent) and other post-secondary enrollment (15 percent). Even those numbers were insufficient to generate MPI's estimate of 241,000 DACA-eligible college enrollees in 2014; so we assumed a surge of over 95,000 college enrollees in 2013, from among the population that had previously graduated from high school. Our estimates imply that by 2033, 36.35 percent of the DACA-eligible population will have college degrees, in line with Census department's 2017 estimate that by the age of 34, 36.4 percent of Hispanics who graduate from high school have gone on to earn college degrees.¹⁴

We assumed that college enrollees have an 81 percent graduation rate, consistent both with the rates observed by thedream.us, an organization that provides scholarship money for DACA students to help cover the cost of college. This is above the national 6-year graduation rates for full-time college students; we attribute this to the fact that a substantial proportion of our sample obtained an associate's degree, which is a common step for this cohort seeking post-college education. We assumed that enrollees in other post-secondary programs had a 50 percent annual attrition rate, either from dropping out or from completion of their program. This gave a flow of DACA-eligibles into the workforce that includes about 44,000 college graduates per year between 2017 and 2023.

We then had to reduce this workforce-entry flow for two reasons. First, not all high school graduates are in the labor force, and not all labor force participants are employed as the population includes those who are unemployed but looking for work. The Bureau of Labor

Statistics (BLS) reports a 75.3 percent employment-population ratio among Hispanics age 25 to 34, so we reduced our estimates of labor force entrants accordingly.¹⁵

Secondly, not all DACA-eligible unlawful immigrants apply for, or are granted, DACA status. MPI estimated that 68 percent of DACA-eligibles have applied for that status with an acceptance rate above 95 percent.¹⁶ We reasoned that since the benefits of DACA status are greater the greater one's earnings potential, we ascribed DACA status to all of the DACA-eligibles with some college or a college degree, but to only one-third of those with only high school degrees. Those assumptions imply that DACA status will slowly rise to 68.8 percent of the eligible population by 2028. If DACA is not just reinstated as a temporary, 2-year renewable status, but is legally enshrined in a permanent status, we would expect DACA participation to rise and the revenue impacts of DACA will increase accordingly.

DACA-eligible Age-earnings Profiles

The estimated age-earnings profiles of DACA-eligibles with only high school or some college are based on the corresponding median 2017 weekly earnings for Hispanics as reported by the BLS.¹⁷ For individuals with high school degrees only, median earnings were \$33,852 a year; using Thornton and his coauthor's research, real earnings rise by about 1 percent a year until about age 40, and are flat thereafter.¹⁸ The resulting pattern begins at about \$27,500 at age 19, when these individuals are assumed to enter the workforce, and rises to the median wage by age 40.

For individuals with some college, median earnings were \$38,324 a year. According to Tamborini and his coauthors, median earnings for these workers are 5.6 percent higher than their high school-only counterparts for those aged 20-29, and 12.6 percent higher for those aged 30-39.¹⁹ The resulting estimated real earnings profile consistent with these values rises from \$28,000 at age 21 to \$39,300 at age 40.

We assigned the starting median salary to all employed DACA-participating individuals at the beginning of their work careers and assumed that their real incomes would rise with age according to the rates above. In reality, some individuals will earn more than those median earnings, and others less. The progressivity of the tax code implies that our revenue estimates for these workers will understate the true revenue impacts, although probably not my much, since

most of these individuals will remain in a relatively low tax bracket regardless of how much they vary from the median. Their estimated taxes were based on the tax rates adopted in December 2017 for single individuals. For years after 2018, nominal tax payments were inflated using an annual 2 percent inflation rate. Per CBO custom, we do not discount the income or tax revenues of future years.

To estimate the earnings of the DACA college graduates, we obtained data from thedream.us. Just under 3,000 students have received financial assistance from thedream.us. For these individuals, we have data on the college in which they are currently enrolled, their expected graduation, their choice of major, previous post-secondary education (a substantial proportion have already earned an associates degree), and their city and state of residence. While we do not have data on their academic performance, a student's area of study is much more relevant to post-college income.

We paired the educational data with income data we obtained from the financial technology company payscale.com, which has an estimated starting salary for college students based on degree, school, and major using reported salary data.²⁰ Our data set had 2,563 usable observations with sufficient data to assign an estimated starting salary. To generate an age-earnings profile, we used estimates from Thornton and his coauthors that found that salaries initially grow at a 4 percent real annual rate, gradually tapering to a 3 percent real annual rate after 10 years.

To account for the fact that most college students begin their employment careers mid-year, we reduced first-year salaries by 60 percent. With this group as well, our tax estimates were based on the tax rates adopted in December 2017 for single individuals. We calculated estimated taxes for each individual for each year in their earnings profile, and then averaged over our entire sample, giving us a profile of average tax payments per college graduate that does account for earnings variability. As with the other two groups, we ascribed these average tax payments to each individual college graduate, beginning in the year they enter the labor force. Once again, we reduce the number of entrants to 75.6 percent of all graduates to reflect employment rates, and inflate nominal payments by a 2 percent inflation rate.

Three Possible Scenarios

The estimate derived above assumes that current DACA recipients are offered a legal way to stay in the country, attend university, and obtain productive employment. From a fiscal standpoint, this would be the most preferred outcome but two others are also possible. The second scenario is that DACA ends and the immigrants currently in the country under its protection will be deported to their countries of origin. Under this scenario, the U.S. government does not only fail to gain any tax revenue from current DACA recipients, but also has to locate and deport 800,000 individuals, a task that would cost over \$10 billion if it were feasible.²¹

The more likely scenario if Congress fails to reach a deal and current DACA recipients lose their legal status is that the vast majority remain in the country illegally and work largely in jobs that require little skill but can be done on a cash basis, allowing them to receive their wages under the table. A proportion might be able to obtain employment by using another person's Social Security Number, a common ruse, which would force them to pay income and payroll taxes, albeit without any ability to collect Social Security or other benefits. Of course, as residents and consumers, they would also continue to pay sales and excise taxes. Given that this activity would happen outside of the law, it is impossible to estimate the revenue impact beyond saying that it would fall somewhere between the first two scenarios.

Estimating the Income and Tax Impacts of Repealing DACA

From the above analysis, we projected the number of DACA recipients in each of the four educational attainment categories for each year and then assigned them an income based on their experience and educational attainment by education (Table 1). For the college graduates we estimated a starting salary based on school and choice of major. The average DACA recipient will earn a salary of approximately \$73,921 per year for the 10-year period from 2019 to 2028. These earnings represent an equivalent gain to U.S. gross domestic product. Factoring in the 75.6 percent employment rate cited above and multiplying by the total number of DACA recipients, we estimate the ten-year GDP impact to be \$351 billion.

Table 1
 DACA Recipients by Educational Category

	2019	2021	2023	2025	2027
Number					
HS degree only	184,767	199,719	209,687	216,031	218,749
Enrolled in College	193,389	165,564	122,726	81,945	47,128
Some college	190,547	208,521	221,908	231,164	236,846
College degrees	245,305	311,468	376,693	430,371	467,533
Total	814,008	885,272	931,014	959,511	970,256
Percentages					
HS degree only	22.7%	22.6%	22.5%	22.5%	22.5%
Enrolled in College	23.8%	18.7%	13.2%	8.5%	4.9%
Some college	23.4%	23.6%	23.8%	24.1%	24.4%
College degrees	30.1%	35.2%	40.5%	44.9%	48.2%
	100.0%	100.0%	100.0%	100.0%	100.0%
Average Earnings					
HS degree only	\$30,332	\$32,019	\$33,844	\$35,816	\$37,959
Enrolled in College	\$0	\$0	\$0	\$0	\$0
Some college	\$32,736	\$34,878	\$37,211	\$39,764	\$42,564
College degrees	\$63,216	\$69,963	\$76,810	\$84,671	\$93,383
Total	\$33,598	\$40,054	\$47,569	\$55,621	\$63,946

Note: "Some college" includes those with more than a high school and less than a college degree who are not currently enrolled in college.

Applying the appropriate tax rates, we also determined that government would gain \$39.2 billion in revenue from DACA recipients over the next ten years. Additionally, we can expect a FICA tax rate of 15.3 percent, resulting in payroll tax revenue of \$53.7 billion over the next ten years. Therefore, the total tax revenue impact would be \$92.9 billion.²² The imputed tax revenue adds up to 25 percent of projected income, the majority of which is driven by FICA.

We projected out an additional year and found that, from the ten-year period comprising 2020 through 2029, the GDP impact would be \$384 billion, and the revenue impact would be \$43.6 billion. If we include the FICA tax (both the employer and employee share), we add an additional \$58.8 billion, for a total tax impact of \$102.4 billion.

It should be noted that salary estimates are based on data that are a few years old and may understate current incomes, and there is reason to believe that incomes will grow faster than

during the previous decade. These estimates do not include the cost of actually tracking down and physically removing all 690,000 DACA recipients from the country, a significant expenditure in itself that would increase the fiscal costs of DACA.

Comparisons with Other Estimates

The above-mentioned Congressional Budget Office score the DREAM Act finds significantly lower revenue gains from DACA recipients than we do here.²³ There are several reasons for this. The first is that CBO regards the income of DACA recipients as merely switching over from “underground” to legal status, and does not believe that this would result in much of a gain in income for those workers, an assumption that we think is without merit. What’s more, the legislation would make these people become eligible for a large number of federal government welfare programs, which it believes would outweigh any tax revenue boost from their newfound legality.

CBO’s methodology essentially assumes the formal employment of DACA recipients merely transfers income from the employer (who would have been taxed on that income had the employee not been hired) to the employee (who is then taxed on the transferred income). The CBO’s estimate also contains offsets for health insurance premium support offered through the Affordable Care Act. However, our analysis suggests that DACA recipients who complete college--a significant proportion of the cohort--become significantly less likely to qualify for premium support soon after completing college.

Finally, CBO makes no allowance for the effects of education and specialization, conducted in a legal environment, on income. DACA recipients who complete college have the potential for considerable income growth, which would result in higher tax obligations and more revenue to the federal government. For these reasons, we estimate that the revenue cost to the federal government of reversing DACA would be substantially higher than the estimate implicitly contained in the DREAM Act.

It should also be noted that our cost estimates look only at the cost of fully reversing the current DACA program, whereas the DREAM Act contains other provisions providing a path to citizenship for immigrants beyond the status quo. A full scoring of the DREAM Act is beyond

the scope of this paper, and the differences found in this somewhat apples-to-oranges comparison are to be expected.

Conclusion

Our revised findings from data of DACA recipients currently matriculating are consistent with our previous analysis and suggest that ending the deferred arrivals program would represent a significant cost to the United States Treasury and the broader economy. We estimate that reversing DACA would cost the U.S. economy \$351 billion from 2019 to 2028 in lost income, and that the U.S. Treasury would lose \$92.9 billion in revenue, including payroll taxes.

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¹¹ Ibid.

¹² Ibid.

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²² We assume that the personal tax rates will not change and ignore the fact that current law repeals them in 2026.

²³ "S. 1615, Dream Act of 2017," Congressional Budget Office Cost Estimate, December 15, 2017, <https://www.cbo.gov/system/files/115th-congress-2017-2018/costestimate/s1615.pdf>.