Estimating the Economic Impacts of DACA

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Abstract

This paper estimates the economic impacts of DACA, on the educational attainment, earnings and federal tax payments of the DACA population, on state and local tax revenues, on the broader American workforce, and on the U.S. economy as a whole. We construct two models of the DACA population and its economic behaviors, the first assuming DACA is made permanent, and the second assuming DACA is terminated at the end of 2019.

We find that eliminating DACA is lose-lose-lose. The DACA population would lose about $120 billion in income, the federal government would lose roughly $72 billion in tax revenue, and states and local governments would lose about $15 billion in tax revenue over the 2020-29 decade.

Those losses would come without any offsetting gains. Eliminating DACA would be, in effect, throwing away some of our nation's human capital resources, dramatically reducing the returns to education for the DACA population, and channeling them into jobs where legal status is ignored, and that do not allow them to take full advantage of their human capital.

This failure to employ all of our human capital would hurt low-to-moderate income workers. Eliminating DACA would merely increase the competition for the kinds of jobs that tend to have an excess supply of workers, while reducing the supply of employable skilled workers in the areas where we have the most acute labor shortages. Overall, we find that eliminating DACA would benefit virtually no one while hurting pretty much everyone.

The Deferred Action for Childhood Arrivals (DACA) was first established in 2012 via an executive order of President Barack Obama. DACA protects from deportation individuals who were transported to the United States as children and who have since proven themselves to be productive members of society, both by maintaining strong educational attainment and not engaging in any criminal activities. From 2012 to 2017 roughly 800,000 people claimed DACA status. While this population could prior to DACA attend most colleges despite their lack of a legal status, the program gave them temporary work permits and access to Social Security numbers, which allowed them to work as well.

During his presidential campaign, Donald Trump promised to rescind DACA. Following up on that promise, in September 2017 Attorney General Jeff Sessions announced that the program was, in fact, being suspended, with DACA recipients given six months grace to get their affairs in order. Four months later, the U.S. District Court of the Northern District of California ruled that the reversal of DACA was unconstitutional, and ordered the government to continue to accept DACA renewals until further notice. A similar injunction was issued by the U.S. District Court of the Eastern District of New York in February 2018. In November 2018, the Ninth Circuit Court of Appeals affirmed the Northern District of California injunction. In May 2019, the Fourth Circuit Court of Appeals vacated the DACA rescission as "arbitrary and capricious." As we write, DACA renewals are currently being accepted and processed, but new applications are not being accepted, and the U.S. Supreme Court has agreed to hear the administration's appeal of the Ninth Circuit Court's decision in the fall.

In July 2017, Sens. Graham, Durbin, Flake, and Schumer introduced the DREAM Act of 2017, S. 1615. The Act would have granted permanent residential status to most DACA recipients. In its analysis of the Act, the Congressional Budget Office (CBO) estimated that the Act would cost the government approximately $24 billion in lost tax revenue over the following decade. It provided a similar $26 billion estimate for the DREAM Act of 2019, H.R 2820. CBO's rationale was that immigrants without work

permits pay certain taxes, most notably payroll taxes, typically by procuring another person's Social Security number, but cannot claim benefits. By granting them legal status these workers would become eligible for various benefit programs and Social Security benefits without paying much more in federal income taxes.

This paper explores the issue of DACA's economic impacts on the educational attainment, earnings and federal tax payments of the DACA population, state and local tax revenues, the broader American workforce, and the U.S. economy as a whole. We find that the biggest impact of ending DACA would be to dramatically reduce the returns to education for the DACA population, channeling them into jobs where legal status is ignored, and that do not allow them to take full advantage of their human capital.

Eliminating DACA would be, in effect, throwing away some of our nation's capital resources. We estimated that its elimination would cost the DACA population about $120 billion in reduced income, with a somewhat greater total loss of economic output that would be even greater. We also estimated that its elimination would cost the federal government roughly $72 billion in lost tax revenue over the 2020-29 decade, consisting of $26 billion in foregone income taxes and $46 billion in foregone payroll taxes. State and local governments would lose another $15 billion during that decade.

Those losses would come without any offsetting gains. Human capital and physical capital are complements, so the failure to employ all of our human capital would hurt the suppliers of physical capital, low-to-moderate income workers. Eliminating DACA would merely increase the competition for the kinds of jobs that tend to have an excess supply of workers, while reducing the supply of employable skilled workers in the areas where we have the most acute labor shortages. Overall, we find that eliminating DACA is lose-lose-lose, benefiting virtually no one while hurting pretty much everyone.

To more accurately estimate DACA's impacts we construct two models of the DACA population and its economic behaviors. The first model estimates their behavior should DACA be made permanent. Under that scenario, the DACA population can be expected

to behave very much like the rest of the legal-status Hispanic population, with similar high school and college completion rates, along with similar post-graduation earnings.[1] Our first model estimates their educational attainment, earnings profiles, and tax payments using the corresponding estimates for the Hispanic population as a whole.[2]

The second model estimates their behavior assuming DACA is terminated at the end of 2019. Under that scenario, the DACA population can be expected to behave very much like the rest of the undocumented Hispanic population, albeit with the higher levels of education that much of this population would have attained prior to its termination. We assume that the roughly 30% of the DACA population that had not yet completed its education by that point would revert to undocumented education rates, and the employment and earnings of the DACA population reflect their lack of legal status following DACA's termination.[3]

1 Economic Outcomes if DACA Is Made Permanent

Estimating the economic production and tax revenues that DACA enrollees are likely to generate over the next decade, should DACA be made permanent, involves three steps. First, we need 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 into the workforce. That profile needs to include estimates of both high school and college drop out rates consistent with the patterns observed in the data.

Second, we need to estimate 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 Bachelor's degree, and those

[1] According to the U.S. Citizenship and Immigration Services (2017), 93.8% of the DACA population are Hispanic.

[2] Since many measures of the Hispanic population do not distinguish between those with legal status and those without, our estimates of the DACA population's economic outcomes in this model are probably biased downward. If so, our paper will understate the true economic impacts of DACA.

[3] A third potential scenario would be to model the DACA population as being deported to their countries of origin. Under this scenario, the U.S. government would not only fail to gain any revenues at all from current DACA recipients, but would also have to locate and deport 800,000 individuals, a task that would cost over ten billion dollars if it were feasible, either from a practical or political perspective. See Hudak and Kamarck (2017).

projected to complete college. Finally, we need to estimate the taxes that these incomes would generate.

1.1 DACA population profile

To understand the economic impact of reversing DACA it helps to understand what distinguishes DACA recipients from other cohorts of legal and illegal immigrants. To be eligible to apply for DACA, immigrants had to be younger than 31 on June 15, 2012, must have come to the U.S. when they were younger than 16, and must have lived in the U.S. since 2007. 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.

Table 1: MPI DACA-eligible Population Estimates

Year		
2014	Enrolled in Secondary School	365,000
	Completed High School, not in Higher Ed.	396,000
	Enrolled in Higher Education	241,000
	Completed Some College	134,000
	Completed a B.A. or B.S.	57,000
	Total	1,193,000
2016	Enrolled in or completed Secondary School	1,300,000
	Under Age 15	228,000
	Total	1,528,000

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. They are, therefore, a cohort that has largely performed well in school and remained out of trouble.

To generate a reasonable age profile for these immigrants, we began with the Migration Policy Institute's (MPI) 2014 estimates of educational attainment and school enrollment for the DACA-eligible population, and their 2016 estimates of the DACA-eligible population.[4] They estimated a 2014 DACA-eligible population of 1.19 million, roughly equally divided between those still in high school, those in or having some college education, and those who had completed high school but had no post-secondary education (Table 1). They also estimated a 2016 DACA-eligible (in high school or high school degree) population of 1.3 million, with an additional 228,000 children below the age of 15 that could eventually become DACA-eligible.[5]

Using these estimates, we generated a time profile of DACA-eligible high school enrollment that gradually tapered from 98,000 freshmen starting high school in 2012 to 8,000 freshmen starting high school in 2023 (Table 2). This pattern fits the constraints of (a) the MPI's estimate of roughly 365,000 high school students in 2014, (b) the MPI's estimate of roughly 228,000 children below the age of 15 in 2016, and (c) the DACA-eligibility requirement that the person be foreign born, but a U. S. resident prior to 2007.

We then used the Hispanic dropout rates from the Census Department's CPS Historical Time Series Tables on School Enrollment to generate a profile of high school graduates from this population. The assumed dropout rate after 2017 of 5.6% is the average of the observed rates from 2012 to 2017. These dropout rates are for students in grades 10 to 12, so we applied them only to students in those three grades.[6]

Our DACA-eligible age profile suggests that by September 2019, the number of DACA-eligibles with high school degrees or better will have risen to 1.3 million, with

[4] Capps, Fix, Zong (2017).

[5] They also estimated that in 2016, there were another 398,000 potential eligibles who did not have the required high school diploma, but could meet that requirement with adult education. Throughout our study, we make the conservative assumption that no poentially-DACA-eligible high school dropouts acquire a high school equivalent degree. Thus, our economic impact estimates likely underestimate the true impact.

[6] A 5.6% dropout rate over three years implies an 84% graduation rate, which aligns with the 84% post-2012 graduation rate estimated by Kuka et al (2018).

an additional 209,000 enrolled in high school and 80,000 enrolled in elementary school.

Table 2: DACA-eligible Age Profile

Year	dropout rate	begin HS-9	HS-10	HS-11	HS-12	HS total	HS grads
pre-2012							580,356
2012	5.09%	98,000	97,858	93,000	88,000	376,858	82,500
2013	5.26%	96,000	98,000	92,710	88,107	374,817	83,370
2014	7.19%	92,000	96,000	90,955	86,045	365,000	81,773
2015	5.69%	84,000	92,000	90,533	85,776	352,309	81,145
2016	4.30%	72,000	84,000	88,048	86,644	330,692	82,091
2017	6.08%	60,000	72,000	78,892	82,694	293,587	81,376
2018	5.60%	48,000	60,000	67,966	74,473	250,439	78,062
2019	5.60%	40,000	48,000	56,638	64,159	208,797	70,301
2020	5.60%	32,000	40,000	45,311	53,465	170,777	60,564
2021	5.60%	24,000	32,000	37,759	42,772	136,531	50,470
2022	5.60%	16,000	24,000	30,207	35,643	105,851	40,376
2023	5.60%	8,000	16,000	22,655	28,515	75,170	33,647
2024	5.60%	0	8,000	15,103	21,386	44,490	26,917
2025	5.60%	0	0	7,552	14,258	21,809	20,188
2026	5.60%	0	0	0	7,129	7,129	13,459
2027	5.60%	0	0	0	0	0	6,729

Note: The numbers progress diagonally: 98,000 freshmen in 2012 become 98,000 sophomores in 2013, 90,955 juniors in 2014, 85,776 seniors in 2015, and 82,091 graduates in 2016.

1.2 DACA college graduates

Estimating the number of DACA-eligibles with high school degrees who would proceed into post-secondary education was straightforward. The U. S. Department of Education, National Center for Education Statistics (NCES) *Digest for Education Statistics* (table 302.20) reports the percentage of recent high school completers enrolled in college, by race and ethnicity. From 2011 to 2016 the 3-year moving average for Hispanic high school completers enrolled in college has ranged from 64.7% and 70.6%; it averaged 67.1% over that 6-year period. Therefore we assumed that 67.1% of DACA-eligibles with high school degrees would enroll in college.

Estimating the number of DACA-eligibles who complete college with a Bachelor's degree is more complicated. The NCES *Digest for Education Statistics* (table 326.10) reports the graduation rates for first-time, full-time bachelor's degree-seeking students from the 4-year postsecondary institutions they started at. For Hispanics, this graduation rate has steadily risen from 45.5% after 6 years for the 1996 starting cohort to 55.0% for the 2011 starting cohort. However, this measure may understate the true graduation rate, as it omits students who graduated from a different 4-year institution after transferring. It may also overstate the true graduation rate, since it omits students who began their postsecondary career at a 2-year institution, which have significantly lower first-year retention rates.[7] And over half of all Hispanics begin their postsecondary careers at a 2-year institution, a far higher percentage than any other ethnic group.[8]

Table 3: Estimated Hispanic College Graduation Rates

Year	18 year-olds	HS grads	% Coll.	Coll. Enroll	Year	Coll. Grds.	Grad. Rate
2010	950,102	799,257	59.7%	477,120	2015	218,098	45.7%
2011	954,441	802,907	66.6%	534,663	2016	235,190	44.0%
2012	949,696	798,915	70.3%	561,591	2017	252,166	44.9%

To overcome this hurdle, we began with the total numbers of Hispanic 18-year-olds reported annually by the U.S. Census Department's *Annual Estimates*, shown in the second column of Table 3. We reduce these population estimates to high school graduate estimates in the third column, using the 5.60% annual attrition rate used in Table 2. We then convert these graduate estimates to college enrollment estimates in the fourth column, using the annual 3-year moving averages for Hispanic high school completers enrolled in college from the NCES *Digest for Education Statistics* (table 302.20). We obtained the number of Hispanic Bachelor's degrees earned for the 2014-15, 2015-16, and 2016-17 academic years from the NCES *Digest for Education Statistics* (table 302.20).

[7] First-year retention rates are from the NCES *Digest for Education Statistics* (table 326.30). However, the differences in retention may just reflect a much higher likelihood to transfer to a different (probably 4-year) institution after one year at a 2-year college.

[8] NCES *Digest for Education Statistics* (table 306.40)

We then compared total Bachelor's degrees to estimated enrollees from 5 years earlier to derive estimated graduation rates, which average 44.8% over the three years.

Table 4 shows our initial estimates of post-secondary educational enrollment for the DACA-eligible population. The first column reports the estimated high school graduations from Table 2. The next two columns divide these graduates into the 67.1% who pursue further education and the 32.9% who move directly into the workforce.

Table 4: DACA Post-secondary Education

Year	HS grads	HS only	College	Coll Enr	Some Coll	BA/BS
2012	82,500	27,142	55,358	55,358	0	0
2013	83,370	27,429	55,941	94,692	16,607	0
2014	81,773	26,903	54,870	125,030	41,139	0
2015	81,145	26,697	54,448	148,985	71,632	0
2016	82,091	27,008	55,083	161,387	101,913	12,401
2017	81,376	26,773	54,603	163,865	132,206	34,233
2018	78,062	25,682	52,380	161,265	162,397	59,022
2019	70,301	23,129	47,172	154,363	191,924	83,570
2020	60,565	19,926	40,639	142,842	219,525	108,130
2021	50,471	16,605	33,866	127,511	244,188	132,664
2022	40,377	13,284	27,093	109,481	265,320	156,655
2023	33,647	11,070	22,577	92,213	282,741	179,080
2024	26,918	8,856	18,062	75,955	297,100	199,041
2025	20,188	6,642	13,546	60,832	308,714	216,096
2026	13,459	4,428	9,031	46,707	317,836	230,131
2027	6,729	2,214	4,515	33,088	324,464	241,637
2028				19,598	328,600	250,993
2029				10,622	330,244	258,327
2030				4,805	330,750	263,638
2031				1,518	330,750	266,926
2032				253	330,750	268,191
2033					330,750	268,444

The last three columns describe the aggregate DACA-eligible college population. To achieve the estimated 44.8% graduation rate, we assume that 30% of all college en-

rollees leave after one year, either because they completed some certification program or because they dropped out; that 20% of all remaining enrollees leave after their second year; that another 20% of all remaining enrollees leave after their third year; and that all the remaining enrollees graduate, half after four years, another three-eights after five years, and the remaining one-eighth after six years.[9]

Table 5: Adjusted DACA Post-secondary Education

Year	HS grads	HS only	College	Backlog	Coll Enr	Some Coll	BA/BS
Pre-2012	580,356	314,526	265,830		59,760	16,940	30,120
2012	82,500	27,142	55,358	90,000	185,118	27,981	39,080
2013	83,370	27,429	55,941	60,000	243,452	76,628	48,040
2014	81,773	26,903	54,870	9,010	241,000	134,000	57,000
2015	81,145	26,697	54,448		234,812	185,676	65,960
2016	82,091	27,008	55,083		214,593	223,938	103,001
2017	81,376	26,773	54,603		186,381	255,241	154,513
2018	78,062	25,682	52,380		166,643	285,432	196,440
2019	70,301	23,129	47,172		154,867	314,959	225,862
2020	60,565	19,926	40,639		142,842	342,560	250,926
2021	50,471	16,605	33,866		127,511	367,223	275,460
2022	40,377	13,284	27,093		109,481	388,355	299,451
2023	33,647	11,070	22,577		92,213	405,776	321,876
2024	26,918	8,856	18,062		75,955	420,135	341,837
2025	20,188	6,642	13,546		60,832	431,749	358,892
2026	13,459	4,428	9,031		46,707	440,871	372,927
2027	6,729	2,214	4,515		33,088	447,499	384,433
2028					19,598	451,635	393,824
2029					10,622	453,279	401,123
2030					4,805	453,785	406,434
2031					1,518	453,785	409,722
2032					253	453,785	410,987
2033					0	453,785	411,240

Table 4's estimates fall well short of the MPI's 2014 DACA-eligible college enrollment and college completion numbers, reported in Table 1. The MPI estimated that in 2014, 241,000 DACA-eligibles were enrolled in higher education, 134,000 had com-

[9]Multiplying 70% x 80% x 80% gives a 44.8% graduation rate.

pleted some college, and 57,000 had completed a B.A. or B.S. Our model shows only 125,030 enrollees in 2014, 41,139 DACA-eligibles with some college, and no bachelor's degrees. Clearly, two things must have occurred. First, some small percentage of this population had been enrolling in post-secondary education before DACA was created, despite their lack of legal status. Second, some fraction of this population that had graduated from high school prior to 2012 had chosen to enroll in post-secondary education shortly after DACA gave them at least temporary legal status.

To capture these effects, we added estimated values for pre-DACA enrollments and backlog first-time enrollments in 2012 and 2013 to the model. We chose the numbers to bring our totals up to the MPI estimates while remaining consistent with our estimated attrition rates. The results are in Table 5. Our estimates imply that by now, not quite half of the DACA-eligibles who had graduated from high school prior to DACA will have enrolled in post-secondary education, significantly lower than the 67.1% rate observed in the overall Hispanic population.[10] Our estimates also imply that by 2033, 27.91% of the DACA-eligible population will have college degrees. This falls short of the Census department's 2017 estimate that by the age of 34, 36.4% of all Hispanics who graduate from high school have earned college degrees, suggesting that our methodology may be overly conservative.[11]

Our estimates in Table 5 allow us to project three streams of workforce entrants from the DACA-eligible population: those with high school degrees only, those with some college, and those with Bachelor's Degrees.[12] To account for the facts that not all high school graduates are in the labor force, and not all labor force participants are employed, we reduced all three entry streams to reflect the average 2011 through 2018 employment rates for each level of educational attainment.[13] The resulting projections, in Table 6,

[10] The 265,830 pre-2012 high school graduates who are projected to have enrolled in college include the 106,820 who were enrolled or had some degree of college completion in 2011, plus the 159,010 "backlog" enrollees in 2012-14.

[11] Our calculation, based on U.S. Census Bureau, "Educational Attainment in the United States: 2017," Table 1.

[12] Although it is extremely likely that some share of those earning Bachelor's Degrees will continue on into Graduate School, we did not attempt to incorporate that into our model.

[13] NCES *Digest for Education Statistics* (table 501.50)

allow us to subsequently project the economic impacts of DACA in the next subsection.

Table 6: DACA Workforce Entry

	HS only	Some Coll	BA/BS
% Empl	69.94%	75.96%	84.89%
Pre-2012	219,979	12,868	25,569
2012	18,983	8,386	7,606
2013	19,184	36,952	7,606
2014	18,816	43,580	7,606
2015	18,672	39,253	7,606
2016	18,889	29,064	31,444
2017	18,725	23,778	43,729
2018	17,962	22,933	35,592
2019	16,176	22,429	24,976
2020	13,936	20,966	21,277
2021	11,614	18,734	20,827
2022	9,291	16,052	20,366
2023	7,742	13,233	19,037
2024	6,194	10,907	16,945
2025	4,645	8,822	14,478
2026	3,097	6,929	11,914
2027	1,548	5,035	9,767
2028	0	3,142	7,942
2029	0	1,249	6,226
2030	0	384	4,509
2031	0	0	2,791
2032	0	0	1,074
2033	0	0	215
Totals	425,453	344,696	349,102

1.3 DACA age-earnings profiles

Earnings change with age, and the rate at which earnings rise with age differ systematically by educational attainment. To reasonably estimate the effects of DACA on the future earnings of the DACA-eligible population, we need to take the various age-earnings profiles into account.

We began by estimating an age-earnings profile for DACA-eligibles with no schooling beyond high school. Median annual earnings for Hispanics age 25 to 34 years old with only high school degrees averaged $30,354 a year from 2010 through 2017.[14] According to Thornton et al. (1997, Table 4), real earnings for workers with high school degrees only rise by about 1% a year until about age 40, and remain flat thereafter. To match this pattern, we assumed that this cohort would initially earn about $27,300 (in 2017 dollars) at age 19, when we assume these individuals enter the workforce, attain the median of $30,354 a year at age 29 and one half, and top off at about $33,700 at age 40 (Table 7).

For Hispanics age 25 to 34 years old with some college but no degree, median earnings averaged $33,499 a year from 2010 through 2017; for those with associate's degrees, median earnings averaged $35,761 a year.[15] According to Tamborini et al. (2015, Tables 2 and 3), median earnings for these workers are 5.6% higher for men and 11.3% higher for women at ages 20-29; at ages 30-39 earnings are 11.9% higher for men and 16.7% higher for women than their high-school-only counterparts. Since we have no estimate of the breakdown between those with some-college-but-no-degree and those with associate's degrees within the DACA-eligible population, nor of the gender breakdown among those who entered post-secondary education but did not earn a Bachelor's degree, we keep our age-earnings profile reasonably consistent with all of these values. It starts at $29,700 at age 21, rising by 1.53% a year thereafter. The resulting earnings at age 24 are 8.2% higher than those with high school degrees only, at age 29 are about $33,500, and at age 34 are 14% higher than those with high school degrees only – all generally fitting the given values (Table 7).

To estimate the earnings of the DACA college graduates, we obtained data from dreamers.us, an organization that provides scholarship money for DACA students to help cover the cost of college. Just under 3,000 students received financial assistance from dreamers.us. For these individuals, we have data on their current college, expected

[14] NCES *Digest for Education Statistics* (table 502.30).
[15] NCES *Digest for Education Statistics* (table 502.30).

Table 7: DACA Age-Earnings Profiles and Taxes, by Education

Age	HS only		Some Coll		BA/BS	
	Income	Taxes	Income	Taxes	Income	Taxes
19	$27,343	$1,647				
20	$27,616	$1,680				
21	$27,892	$1,713	$29,700	$1,930		
22	$28,171	$1,747	$30,154	$1,984		
23	$28,453	$1,780	$30,615	$2,040	$41,487	$3,344
24	$28,738	$1,815	$31,083	$2,096	$43,146	$3,544
25	$29,025	$1,849	$31,559	$2,153	$44,829	$3,745
26	$29,315	$1,884	$32,042	$2,211	$46,533	$3,950
27	$29,608	$1,919	$32,532	$2,270	$48,255	$4,157
28	$29,904	$1,954	$33,030	$2,330	$49,992	$4,365
29	$30,203	$1,990	$33,535	$2,390	$51,742	$4,679
30	$30,505	$2,027	$34,048	$2,452	$53,501	$5,066
31	$30,810	$2,063	$34,569	$2,514	$55,267	$5,455
32	$31,118	$2,100	$35,098	$2,578	$57,036	$5,844
33	$31,429	$2,137	$35,635	$2,642	$58,804	$6,233
34	$31,743	$2,175	$36,180	$2,708	$60,568	$6,621
35	$32,060	$2,213	$36,734	$2,774	$62,324	$7,007
36	$32,381	$2,252	$37,296	$2,842	$64,069	$7,391
37	$32,705	$2,291	$37,867	$2,910	$65,799	$7,772
38	$33,032	$2,330	$38,446	$2,980	$67,510	$8,148
39	$33,362	$2,369	$39,034	$3,050	$69,198	$8,520
40	$33,696	$2,410	$39,631	$3,122	$70,859	$8,885
41	$33,696	$2,410	$40,237	$3,194	$72,489	$9,244
42	$33,696	$2,410	$40,853	$3,268	$74,084	$9,594
43	$33,696	$2,410	$41,478	$3,343	$75,640	$9,937
44	$33,696	$2,410	$42,113	$3,420	$77,153	$10,270
45	$33,696	$2,410	$42,757	$3,497	$78,619	$10,592

graduation date, their choice of major, previous post-secondary education (a substantial proportion have already earned an associates degree), and their city and state of residence. We have no data on college performance.

We paired the educational data with income data we obtained from the fintech company payscale.com, which has an estimated starting salary for college students based on degree, school, and major using reported salary data. Our data set had 2,563 usable

observations, with a median expected starting salary of $59,875.[16] This is probably too high an estimate, as it is well above the $46,443 median annual earnings for 25 to 34 year old Hispanics with a Bachelor's degree, or even the $50,858 median annual earnings for all 25 to 34 year olds a Bachelor's degree, as reported in the NCES *Digest for Education Statistics* (table 502.30; average of 2010 to 2017, in 2017 dollars). However, our data set shows that the DACA college students attend universities in states with a median household income 5.28% higher than in the country as a whole, suggesting that a 2017 median salary of $53,500 at age 30 would be a reasonable estimate.

Table 8: Aggregate DACA Income and Taxes, by Education ($B)

Year	HS only		Some Coll		BA/BS	
	Income	Taxes	Income	Taxes	Income	Taxes
2019	$10.905	$0.696	$6.901	$0.467	$9.135	$0.792
2020	$11.631	$0.747	$7.839	$0.534	$10.578	$0.931
2021	$12.319	$0.797	$8.779	$0.602	$12.096	$1.080
2022	$12.966	$0.845	$9.694	$0.670	$13.690	$1.242
2023	$13.591	$0.891	$10.565	$0.736	$15.322	$1.417
2024	$14.192	$0.937	$11.384	$0.799	$16.954	$1.604
2025	$14.767	$0.982	$12.162	$0.860	$18.563	$1.798
2026	$15.312	$1.026	$12.902	$0.920	$20.134	$1.997
2027	$15.825	$1.068	$13.607	$0.979	$21.680	$2.163
2028	$16.303	$1.109	$14.274	$1.036	$23.206	$2.339
2029	$16.795	$1.151	$14.898	$1.091	$24.712	$2.526
2030	$17.302	$1.195	$15.429	$1.141	$26.190	$2.722
2031	$17.825	$1.240	$15.978	$1.192	$27.631	$2.927
2032	$18.363	$1.286	$16.547	$1.246	$28.968	$3.142
2033	$18.818	$1.323	$17.136	$1.302	$30.341	$3.363

To generate an age-earnings profile for college graduates, we assumed those salaries, per Thornton et al. (1997), would initially grow at a 4% real annual rate, gradually tapering to a 3% real annual rate after 10 years, and a 2% real annual rate after another decade. That gave us an average starting salary of $41,487.

For all three of these groups, we assigned the age-profile starting salaries to all em-

[16] The mean was virtually the same, $59,640.

ployed DACA-participating individuals at the beginning of their work careers, with their real incomes rising with age. 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 by much, since most of these individuals will remain in a relatively low tax bracket for the next decade, regardless of how much their income varies from the median.

Table 9: Aggregate DACA Income and Taxes ($B)

Year	Income	Inc. Taxes	FICA Taxes
2019	$26.941	$1.955	$4.122
2020	$30.048	$2.212	$4.597
2021	$33.194	$2.479	$5.079
2022	$36.350	$2.757	$5.562
2023	$39.478	$3.044	$6.040
2024	$42.530	$3.340	$6.507
2025	$45.492	$3.640	$6.960
2026	$48.348	$3.943	$7.397
2027	$51.112	$4.210	$7.820
2028	$53.783	$4.484	$8.229
2029	$56.405	$4.768	$8.630
2030	$58.921	$5.058	$9.015
2031	$61.434	$5.359	$9.399
2032	$63.878	$5.674	$9.773
2033	$66.295	$5.988	$10.143
2020-29	$436.740	$34.877	$66.821
2021-30	$465.613	$37.723	$71.239

Their estimated income taxes were based on the tax rates adopted in December 2017 for single individuals. FICA taxes are 15.3% of income, which includes both the employer's and employee's share. For years after 2018, nominal income and tax payments were inflated using an annual 2% inflation rate. Per CBO custom we do not discount the income or tax revenues of future years.

Table 8 reports the annual estimated aggregate nominal income and income tax payments of the three DACA-eligible education groups for the years 2019-2033, in billions of

dollars. Table 9 aggregates these income and income tax estimates by year, and reports the corresponding FICA taxes. Overall, we estimate that if DACA were continued, for the decade 2020-2029 the DACA-eligible population would have an aggregate income of $437 billion, pay $35 billion in income taxes, and generate $67 billion in FICA taxes.

As we will show below, those numbers are all substantially greater than our estimated income and tax payments for the DACA-eligible population, if DACA is eliminated.

2 Economic Outcomes if DACA Ends

The elimination of DACA would profoundly affect this population. The 440,000 DACA-eligibles who are still in school would have a reduced incentive to continue their education, since DACA's elimination would severely restrict their future employment opportunities. And many of the 1.06 million DACA-eligibles currently in the workforce would be forced to leave their current employment, migrating to the typically less rewarding and less productive jobs that can be done without legal employment status.

To estimate the economic impacts of eliminating DACA, we estimate the effect that would have on educational outcomes, earnings, and labor force participation. Those estimates in turn provide us with estimated aggregate income and tax payments for the DACA-eligible population, which can be compared to the corresponding estimates from a continued DACA in the previous section.

2.1 Educational attainment without DACA

To estimate how educational outcomes in the DACA population would change if DACA ended, we begin by estimating how its creation affected those outcomes. The clearest impact has been on high school graduation, since its effect is unambiguous. DACA provides benefits, both pecuniary (principally greater post-graduation employment opportunities) and non-pecuniary (primarily a temporary reduction in deportation risk) only

if high school graduation is attained. Three studies have explored how legal status affects high school graduation, all concluding that DACA has increased the high school graduation rate significantly in the DACA population.

In an analysis that pre-dated DACA, Passel and Cohn (2009) estimated a high school completion rate of only 72% among undocumented immigrants who arrived in the United States before the age of 14 years, 10% lower than native-born Americans. Similarly, using (2000 to 2011) pre-DACA data on teenagers aged 13 to 17, Liscow and Woolston (2018) found that undocumented siblings of Mexican heritage were roughly twice as likely to not be enrolled in school as their U.S.-born siblings. Since Passel and Cohn reported a better than 2-to-1 ratio of U.S.-born to foreign-born children in undocumented immigrant families, and the overall Hispanic dropout rate averaged 5.8% over that 12 year period, Liscow and Woolston's "double likelihood" estimate suggests annual dropout rates of 4.3% and 8.8%, and high school graduation rates of 88% and 76%, among Hispanic U.S.-born versus foreign-born children.

Using data than spanned the creation of DACA, Kuka et al (2018) compared the educational attainment of potentially DACA-eligible Hispanics to that of foreign-born citizens with the same age and year of arrival profiles. They found that DACA increased high school completion of 19 to 22 year olds by 5.9 percentage points, to about an 84% graduation rate. Merging these three studies suggests that the high school graduation rate with legal status is the 84% we used in our estimate of the economic outcomes under DACA, and without legal status would be roughly 76%.[17]

However, DACA's effect on college enrollment is not unambiguous. It increases the benefits of higher education by opening up future employment opportunities that would not be accessible without legal status. But it also raises the opportunity cost of higher education, by increasing the current income that must be foregone in pursuing that higher education. We would expect that the former effect would predominate if DACA recipients

[17] This would imply an annual dropout rate of 8.7% for each of the last three years of high school.

perceive DACA as being likely to provide permanent legal status, but that the latter effect would predominate if DACA recipients saw the program as only a temporary opportunity to work legally.

It is therefore not surprising that the evidence on DACA's effect on college enrollment is mixed. Hsin and Ortega (2018) estimated the effects of DACA on DACA-eligibles who were already enrolled in college when DACA was first announced. They note that the DACA college-enrolled population was already positively selected compared to immigrants with legal status, with higher average high school GPAs and lower pre-DACA dropout rates, indicating that the lack of legal status had deterred college enrollment. They found that DACA increased the college dropout rate by 7.3 percentage points among students at four-year colleges, while decreasing the full-time enrollment rate at community colleges by 5.5 percentage points. Their results suggest that not quite one-tenth of already-enrolled DACA recipients reacted as if the program would be only temporary. Of course, since they were only studying DACA-eligibles already enrolled in college, they could not possibly have found any enrollment increase.

Pope (2016) compared DACA participants who barely met the qualifications (by being just below the age of 16 when they entered the country, or just below the age of 30 when DACA was announced) to their peers who barely missed qualifying for DACA, and found DACA had no effect on education. And Kuka et al (2018), using data comparing potentially DACA-eligible Hispanics to foreign-born citizens, found that DACA increased college attendance by only around 3 percentage points. However, we suspect that this result may be strongly affected by the significant differences in family educational backgrounds between DACA-eligible Hispanics and foreign-born citizens.

In strong contrast to these results, Kaushal (2008) reported that for the 1997-2005 period only about 29% of the young noncitizen adults of Mexican origin age 23-28 with high school degrees had any college attendance, as compared to 43% of young noncit-

izen non-Mexican Latinos and 75% of young noncitizen non-Latinos.[18] According to the U.S. Citizenship and Immigration Services (2017), 79.4% of the DACA population are of Mexican origin, and another 14.4% are of other Latin American origin. Applying these 1997-2005 college attendance rates to the immediately pre-DACA period suggests that about only 38% of DACA-eligibles who graduated from high school prior to 2012 would have attended college before DACA, well shy of the 67.1% of Hispanic high school completers enrolled in college reported by the NCES *Digest for Education Statistics* (table 302.20).

Cortes (2013) reaches similar conclusions by comparing the educational attainment of young immigrants legalized by the 1986 Immigration Reform and Control Act (IRCA) to other undocumented immigrant youth. She found that legal status in 2000 increased college enrollment in that population by 15 percentage points, at a time when overall Hispanic college enrollment was only around 50%. Similarly, Wong et al (2016, 2017, 2018) found, in a series of on-line surveys of DACA recipients, that 64% of the respondents reported having "pursued educational opportunities that I previously could not," principally, post-secondary education.

Recall that, to make sense of the MPI's 2014 DACA-eligible college enrollment and college completion numbers, as reported in Table 1, we had to incorporate into Table 6 estimated values for pre-DACA college enrollments and for backlog first-time enrollments in 2012 and 2013. Our numbers suggest that prior to DACA, only about 18% of the future-DACA-eligible high school graduates enrolled in college, but that the aggregate college enrollment among these pre-2012 high school graduates jumped to 45% by 2014. We then used the NCES *Digest for Education Statistics'* estimated 67.1% college enrollment rate for Hispanic high school completers for the high school cohorts who graduated after DACA was established.[19]

[18] These differences are probably due to the fact that many non-Mexican undocumented immigrants arrived in the U.S. on student visas, and subsequently overstayed those visas.

[19] In a report on a 2013 survey of DACA participants, a year after DACA began, Gonzales, Terriquez and Ruszczyk (2014) found that 22% had already obtained a bachelor's degree, another 69% either had or were attending a 4-year or community college. Our simulation numbers are generally in line with their findings.

Overall, we believe that it is reasonable to estimate that if DACA ended, the college enrollment rate would drop back down to only about 40% of high school completers.[20]

Table 10 reflects these changes, and recalculates the numbers from Table 6 beginning in 2020. The annual high school dropout rate has risen to 8.7%, only 40% of high school completers enroll in college, and the college dropout rates for those who were enrolled when DACA expired has risen to 40% after one year and 30% after the second and third year, reflecting the likelihood that many DACA-eligibles who enrolled in college under the promise of DACA would become discouraged by its elimination. As we did in Table 6, we applied employment rates to each level of educational attainment from the NCES *Digest for Education Statistics* (table 501.50), adding the corresponding employment rate for those with less than high school completion. We further adjusted those employment rates to reflect the lower likelihood of employment when a worker is undocumented, which we will address more fully in the the next subsection.[21]

Table 10 shows 52 more high-school-only DACA-eligible workforce entrants, 45,466 fewer workforce entrants with some college, and 63,966 fewer college graduates in the workforce than in Table 6. There are also 9,575 additional high school dropouts from this population in the workforce. These changes primarily reflect the impacts of eliminating DACA on employment rather than on education. The estimated changes in educational attainment are in fact relatively moderate, primarily because we estimate that 71% of the Table 6's population had completed its education and entered the workforce before DACA's termination.[22]

Amuedo-Dorantes and Antman (2016) found that DACA decreased education among DACA-eligibles relative to DACA-ineligible undocumented immigrants. However, their small DACA-eligible sample sizes and the high level of post-secondary education in their DACA-eligible group prior to DACA lead us to discount their results.

[20] Our overall results are not very sensitive to this estimate, since in our model about 83% of the DACA population has already completed high school by the time DACA is assumed to end.

[21] The high school dropouts reported in the table are our estimated net increase in dropouts due to the elimination of DACA. Undocumented immigrants who would already have dropped out had DACA continued would be unaffected by the policy change.

[22] Technically, the elimination of DACA, modeled as occurring at the end of 2019, would not affect workforce entry prior to 2020. However, it would reduce the employment of those earlier workforce cohorts thereafter. Reducing the workforce entry numbers for the years before 2020 simplifies the calculation of the economic affects after DACA is eliminated.

Table 10: No-DACA Workforce Entry

	HS dropout	HS only	Some Coll	BA/BS
% Empl (DACA)	57.18%	69.94%	75.96%	84.89%
% Empl (No DACA)	51.18%	63.94%	69.96%	78.89%
Pre-2012	0	201,108	11,852	23,762
2012	0	17,355	7,724	7,069
2013	0	17,538	34,033	7,069
2014	0	17,202	40,137	7,069
2015	0	17,070	36,153	7,069
2016	0	17,269	26,767	29,222
2017	0	17,119	21,900	40,638
2018	0	16,421	21,122	33,076
2019	0	14,789	20,656	23,211
2020	2,676	22,472	27,313	19,773
2021	2,056	18,112	16,244	18,149
2022	1,606	14,014	10,416	15,853
2023	1,278	11,679	6,753	12,896
2024	950	9,343	5,466	10,016
2025	622	7,007	4,382	7,812
2026	294	4,671	3,442	6,120
2027	93	2,336	2,500	4,924
2028	0	0	1,560	3,981
2029	0	0	619	3,121
2030	0	0	191	2,260
2031	0	0	0	1,399
2032	0	0	0	539
2033	0	0	0	108
Totals	9,575	425,505	299,230	285,136

2.2 Employment without DACA

There are two reasons to expect that the termination of DACA would reduce, but not eliminate, employment in the DACA population. The first, already captured in the previous section, is the reduced educational attainment. As the NCES *Digest for Education Statistics* (table 501.50) reports, employment rates are higher, the higher the level of education, so less educational attainment means fewer employed workers. That effect

is already reflected into the numbers in Table 10.

Secondly, the loss of legal status will itself prove a hindrance to obtaining employment. Pope (2016), comparing the labor market outcomes of DACA participants to their peers who barely missed qualifying for DACA, found that DACA increased labor force participation and decreased unemployment among DACA participants, increasing the likelihood than an individual was employed by between 4.8 and 7.7 percentage points. Since Pope found no effect of DACA on education in his study, this employment effect must be independent of the effects of education.

In Table 10, the employment rates have all been reduced by 6 percentage points to reflect Pope's estimates. However, when the employment rate is only 69.94%, a 6 percentage point decline in employment reduces the employment rate to 63.94%, which is a nearly 9% reduction.[23]

2.3 Earnings without DACA

It would be surprising if legal status did not impact the financial rewards to employment. Being able to work legally opens up a wide array of job opportunities that would otherwise be unavailable to the worker, almost certainly leading to an increase in earnings.

Two studies of the effects of the Immigration Reform and Control Act (IRCA) of 1986 on the earnings of previously undocumented Mexican immigrants found exactly that. Rivera-Batiz (1999) compared the earnings of undocumented Mexican immigrants surveyed in 1987-8 with their earnings in 1992, after gaining legal status through IRCA. The majority of his sample were poorly educated, with nine or fewer years of education. He found, after accounting for changes in education, language proficiency, employment sector, and employment experience that had occurred during the intervening period, that legal status increased men's earnings by about 8% and women's earnings by nearly 13%.

[23] 0.6394/0.6994 = 91.4%.

Kossoudji and Cobb-Clark (2002) compared the same population of Mexican immigrant men who gained legal status under IRCA with a sample of (primarily U.S.-born) Latino man who entered the job market at about the same time. Similar to Rivera-Batiz, they concluded that prior to IRCA, the lack of legal status had reduced the men's earnings by 14% to 22%. They also found that prior to gaining legal status, there was only a small, statistically insignificant wage premium for education among the Mexican immigrants, which increased dramatically after legal status was obtained.

Pope (2016) looked at the effects of DACA on earnings, and found that DACA increased incomes in the bottom half of those working by 5% to 20%, but had little effect on those in the top of income distribution. This latter result is surprising, since Borjas (2017, Table 3) estimated than the returns to education for undocumented workers were only slightly more than half those of native-born workers.[24] He also found that the overall wage penalty to undocumented immigrants who had been in the U.S. for over a decade declined from around 12% prior to 2007 to around 8% in 2011-14.

Two sets of surveys report earnings gains for DACA recipients. Gonzales, Terriquez and Ruszczyk (2014) surveyed 2,381 DACA recipients in 2013, shortly after the program was implemented. 59% of those surveyed reported having obtained a new job, and 45% reported increased job earnings. Both positive outcomes were significantly more likely for those who had earned college degrees. Wong et al (2016, 2017, 2018), in three surveys with a total of 5,421 DACA respondents, reported that 64% of those surveyed reported having obtained a better paying job, 51% reported having obtained a job that better fit their education, and 68% reported increased job earnings. Their average earnings rose 65% for the full sample, and 88% for those 25 and older in the 2017 or 2018 surveys.

Since the acquisition of legal status clearly raised DACA recipients' incomes, the loss of that status would reduce those incomes. We model the impact of ending DACA as

[24] His education coefficients (in regressions of log income on various demographic measures) for native-born Americans averaged 0.118; they averaged 0.064 for undocumented immigrants.

reducing the earnings of all the DACA-eligibles of the previous section, but especially of those with the highest education. We began by assuming that otherwise-DACA-eligibles who dropped out of high school earn $21,800 a year in 2017 dollars, with only an inflationary increase over time; that is, with no increasing age-earnings profile. The $21,800 roughly equals the $20,000 that DACA respondents reported earning on average prior to DACA in Wong's 2017 and 2018 surveys, adjusted for inflation. It also represents a 15% wage penalty relative to the median income for all Hispanics with less than a high school education, $25,520 a year in 2017 dollars.[25]

In Table 11 we have adjusted downward the age-earnings profiles from Table 7, relative to that $21,800 figure. For those with high school degrees or some college, our without-DACA incomes are 55% of the difference between the with-DACA incomes and the $21,800 base.[26] For those with college degrees, without-DACA incomes are 40% of the difference between the with-DACA incomes and the $21,800 base. This reflects the fact that many of the highest paying jobs open to college graduates with legal status – such as Chemical Engineer or Systems Analyst – would be totally inaccessible once that status is removed. These adjustments capture Borjas' (2017) estimate that lack of legal status cuts the returns to education roughly in half, and are consistent with Kossoudji and Cobb-Clark's (2002) finding that legal status dramatically increased the education wage premium.

2.4 Income and Taxes without DACA

Combining the adjusted age-earnings profiles in Table 11 with the streams of workforce entrants in Table 10 gives income streams and aggregate income tax payments for each of the four education levels, which we present in Table 12. Note that the 2019 numbers are identical to those in Table 8, since we are modeling the policy change as occurring

[25] NCES *Digest for Education Statistics* (table 502.30)

[26] Thus, a 25 year-old with some college who would have earned $31,559 under DACA would now earn {$21,800 +0.55($31,559-$21,800)} = $27,167.

Table 11: No-DACA Age-Earnings Profiles, by Education

Age	HS dropout	HS only	Some Coll	BA/BS
19	$21,800	$24,849		
20	$21,800	$24,999		
21	$21,800	$25,151	$26,145	
22	$21,800	$25,304	$26,395	
23	$21,800	$25,459	$26,648	$29,675
24	$21,800	$25,616	$26,906	$30,338
25	$21,800	$25,774	$27,167	$31,012
26	$21,800	$25,933	$27,433	$31,693
27	$21,800	$26,094	$27,703	$32,382
28	$21,800	$26,257	$27,977	$33,077
29	$21,800	$26,422	$28,254	$33,777
30	$21,800	$26,588	$28,536	$34,480
31	$21,800	$26,756	$28,823	$35,187
32	$21,800	$26,925	$29,114	$35,894
33	$21,800	$27,096	$29,409	$36,602
34	$21,800	$27,269	$29,709	$37,307
35	$21,800	$27,443	$30,014	$38,010
36	$21,800	$27,620	$30,323	$38,708
37	$21,800	$27,798	$30,637	$39,400
38	$21,800	$27,978	$30,955	$40,084
39	$21,800	$28,159	$31,279	$40,759
40	$21,800	$28,343	$31,607	$41,424
41	$21,800	$28,343	$31,940	$42,076
42	$21,800	$28,343	$32,279	$42,714
43	$21,800	$28,343	$32,623	$43,336
44	$21,800	$28,343	$32,972	$43,941
45	$21,800	$28,343	$33,326	$44,528

at the end of 2019.

We again aggregate these income and income tax estimates by year and report the corresponding FICA taxes in Table 13. The results suggest that if DACA were terminated, for the decade 2020-2029 the formerly DACA-eligible population would have an aggregate income of only $316 billion, pay only $20 billion in income taxes, and generate only $48 billion in FICA taxes.

Table 12: No-DACA Aggregate Income and Taxes, by Education ($B)

Year	HS dropout		HS only		Some Coll		BA/BS	
	Income	Taxes	Income	Taxes	Income	Taxes	Income	Taxes
2019			$10.905	$0.696	$6.901	$0.467	$9.135	$0.792
2020	$0.061	$0.003	$9.658	$0.550	$7.024	$0.379	$6.626	$0.459
2021	$0.109	$0.005	$10.390	$0.594	$7.685	$0.439	$7.475	$0.522
2022	$0.150	$0.007	$11.041	$0.634	$8.210	$0.483	$8.295	$0.585
2023	$0.183	$0.008	$11.652	$0.673	$8.652	$0.520	$9.061	$0.646
2024	$0.210	$0.009	$12.221	$0.709	$9.074	$0.552	$9.769	$0.703
2025	$0.230	$0.010	$12.744	$0.744	$9.479	$0.584	$10.435	$0.759
2026	$0.242	$0.011	$13.216	$0.776	$9.871	$0.615	$11.071	$0.814
2027	$0.249	$0.011	$13.635	$0.805	$10.248	$0.645	$11.691	$0.857
2028	$0.254	$0.011	$13.996	$0.832	$10.608	$0.676	$12.301	$0.902
2029	$0.260	$0.012	$14.367	$0.860	$10.930	$0.705	$12.902	$0.947
2030	$0.265	$0.012	$14.748	$0.888	$11.262	$0.733	$13.492	$0.995
2031	$0.270	$0.012	$15.139	$0.917	$11.605	$0.762	$14.067	$1.043
2032	$0.275	$0.012	$15.541	$0.948	$11.959	$0.792	$14.604	$1.093
2033	$0.281	$0.013	$15.904	$0.973	$12.325	$0.823	$15.154	$1.144

However, those numbers assume that this population would, despite the loss of legal status, fully comply with the tax laws and pay all of their required tax liabilities. A far more reasonable assumption would be that a considerable fraction of these taxes would go unpaid. Social Security's Office of Chief Actuary (Goss el al 2013) has estimated that only about 44% of undocumented workers paid Social Security taxes in 2010.[27] Since we cannot imagine why an underground worker who is not paying Social Security taxes would then pay income taxes, we apply this 44% compliance rate to both sets of taxes. Under this assumption, the formerly DACA-eligible population would again have an aggregate 2020-2029 income of $316 billion, but pay just $9 billion in income taxes, and generate just $21 billion in FICA taxes.

[27] They estimated that there were about 7 million unauthorized workers that year, of whom 3.9 million were identified as working in the underground economy, and thus not paying taxes, with the remaining 3.1 million unauthorized workers tax compliant.

Table 13: No-DACA Aggregate Income and Taxes ($B)

Year	Income	Inc. Taxes	FICA Taxes
2019	$26.941	$1.955	$4.122
2020	$23.369	$1.391	$3.575
2021	$25.659	$1.560	$3.926
2022	$27.696	$1.709	$4.237
2023	$29.548	$1.847	$4.521
2024	$31.274	$1.973	$4.785
2025	$32.888	$2.097	$5.032
2026	$34.400	$2.216	$5.263
2027	$35.823	$2.318	$5.481
2028	$37.159	$2.421	$5.685
2029	$38.459	$2.524	$5.884
2030	$39.767	$2.628	$6.084
2031	$41.081	$2.734	$6.285
2032	$42.379	$2.845	$6.484
2033	$43.664	$2.953	$6.681
Assuming Full Tax Compliance			
2019-28	$304.757	$19.487	$46.627
2020-29	$316.275	$20.056	$48.389
2021-30	$332.673	$21.293	$50.898
Assuming 44% Tax Compliance after 2019			
2019-28	$304.757	$9.669	$22.824
2020-29	$316.275	$8.825	$21.291
2021-30	$332.673	$9.369	$22.395

3 Consequences of Ending DACA

As the previous two sections show, ending DACA would have significant economic consequences, summarized in Table 14. The DACA population would face a 28% decline in earnings, primarily through a loss in the return to education. Ending DACA would be, in effect, a 50% tax on their return to investment in human capital, an investment made in good faith when the promise of legal status was held out to them. Ending DACA would also result in a roughly $72 billion loss in tax revenue to the federal government over the 2020-29 decade.

Ending DACA would also affect state and local government tax revenues, the earnings

Table 14: Consequences of Ending DACA ($B)

2020-29	Income	Inc. Taxes	FICA Taxes
Under DACA	$436.740	$34.877	$66.821
DACA Terminated	$316.275	$8.825	$21.291
Difference	$120.465	$26.052	$45.530
% Difference	27.58%	74.70%	68.14%

of American citizens, and the U.S. economy as a whole. We address each of those changes in the subsections below.

3.1 The Impact on State and Local Governments

Ending DACA would reduce state and local government tax revenues by reducing the incomes and resulting consumer spending that those governments tax. To estimate those revenue affects, we calculated each state's share of the total DACA population, based on the Migration Policy Institute (2018) estimated distribution.[28] These shares were then weighted by states' 2017 median household incomes to estimate the share of total DACA income to attribute to each state.

State and local tax revenues as a percent of state personal income were downloaded from the Urban Institute-Brookings Institution Tax Policy Center. Our estimated changes in property tax revenue and in sales and gross receipts tax revenue for each state are the products of our estimated change in DACA income times the state's weighted income share, multiplied by that tax's revenue as a percent of state personal income. We calculate estimated changes in income tax revenue similarly, but assume that only 44% of the DACA population's income would be reported if DACA were eliminated.

Table 15 reports these tax revenue losses for the 10 states with the largest income shares and for the nation as a whole, in million of dollars. Overall, the 50 states, Washington D.C., and their local tax jurisdictions would lose about $15 billion during the 2020-

[28] The MPI's estimates include 40 states, covering 98.9% of the DACA-eligible population.

Table 15: 2020-29 State/Local Tax Revenue Cost of Ending DACA ($M)

State	Share	Inc Loss	Prop Tax	Sales Tax	Inc Tax	Tax Loss
California	33.57%	$40,442	$1,096	$1,290	$3,567	$5,953
Texas	13.55%	$16,320	$623	$712		$1,335
New York	5.90%	$7,113	$325	$255	$845	$1,425
Illinois	4.82%	$5,811	$235	$208	$294	$737
New Jersey	4.69%	$5,649	$285	$136	$335	$756
Florida	4.55%	$5,479	$150	$209		$359
Georgia	3.09%	$3,719	$101	$112	$218	$431
North Carolina	2.52%	$3,034	$69	$101	$208	$378
Arizona	2.34%	$2,824	$74	$120	$98	$292
Washington	2.17%	$2,619	$68	$147		$215
Total	98.9%	$119,139	$3,751	$4,138	$7,168	$15,057

29 decade.

3.2 The Impact on American Workers

One of the ironies of the proposal to end DACA is that it would convert a population with a substantial fraction of high-skilled workers into a population of at best moderate-to-low skilled workers. A high-school-only DACA-eligible worker currently employed in retail sales would face a comparatively small loss in income if he lost that job when his DACA work authorization ended, since there are undoubtedly many small retailers willing to hire him to do the same job, albeit off the books at a somewhat lower wage. But a DACA-eligible worker with a degree in structural engineering would be unlikely to find an employer willing to hire her without work authorization, forcing her to compete in that same market for retail jobs.

The economics literature shows that skilled immigrant workers have a beneficial impact on the employment of both skilled and unskilled American citizens. One reason for this is that skilled immigrants have a relatively small substitution effect on skilled domestic workers, because those skilled immigrants are relatively mobile and go where there

are many available jobs. In contrast, the U.S. labor force is less flexible: geographic mobility has gradually diminished in the U.S. since the 1950s, and has fallen by 10% in just the last few years.[29] The chief reason for this trend is the rise in two-income households, which increases the cost of moving for one spouse's job.

Skilled immigrants also have a positive impact on domestic employment because they create what economists call a "scale effect": skilled immigrants boost overall economic activity, creating more opportunities and jobs for both skilled and unskilled domestic workers. This scale effect outweighs their small substitution effect for skilled domestic workers. For example, Peri et. al. (2014a) showed that reducing the number of skilled foreign workers coming to a community significantly reduced the wages of college-educated U.S.-born workers in those communities who work with computers.[30]

Skilled immigrants have an unambiguously positive effect on unskilled U.S. born workers. Skilled workers and unskilled workers are, in general, complementary, just as skilled workers and capital are complementary – that is, an increase in the quantity of one increases the demand and price for the other (Chiswick 2011). Hence, an increase in the supply of skilled immigrants increases the amount of capital in the economy and – along with it – the demand for unskilled workers. This results in higher wage and employment levels for unskilled workers, even without the scale effect (Kiley 1999).

Highly-skilled immigrants are also more likely to create new businesses than U.S. citizens with similar skills and education. Immigrants in the U.S. are 30% more likely to start a new business than a native worker, and 25% of all startups in Silicon Valley have been founded by immigrants (Wolla 2014).

In addition, highly-skilled, well-educated workers, both foreign-born and domestic, have high employment levels, are less likely to avail themselves of public services such as food stamps or welfare, and are more likely to be in occupations that are hard to fill. As a result, they boost U.S. tax revenues while having little impact on government

[29] Feintzeig and Weber (2018).
[30] See also Peri, Shih, and Sparber (2014b).

spending.[31]

Ending DACA would reduce the supply of high skilled workers while increasing the supply of low skilled workers in the economy.[32] The increased competition for low-skilled jobs would hurt low skilled domestic workers; the DACA population's loss of income would create a negative scale effect, reducing the demand for high and low skill workers alike.

Thus, any belief that ending DACA would be a boon for low skilled American workers is therefore sadly out on line with the facts.

4 Conclusion

DACA provides legal status, and legal work authorization, to over a million young people who came to this country as children, and who, except for their currently tenuous legal status, mostly identify as Americans. As the Congressional Budget Office (CBO) implicitly and we believe correctly assumed when they scored S. 1615, these young people are highly likely to remain in the U.S., and in the U.S. workforce, regardless of whether DACA is discontinued. The primary impact of ending DACA would therefore be to channel them into jobs where legal status is ignored, and therefore for the most part into jobs that do not allow them to take full advantage of their human capital.

Eliminating DACA would be, in effect, throwing away some of our nation's capital resources. We estimated that its elimination would cost the DACA population about $120 billion in reduced income (Table 14). But workers rarely capture all of their productivity in wage income, so the total loss of economic output would be even greater. As a result, the losses in tax revenue at both the federal and state/local level will likely exceed our

[31] For a literature review on this topic see Brannon and Albright (2016).

[32] The Congressional Budget Office (CBO) score for S. 1615 effectively assumed that DACA merely switches the DACA population from underground to legal status, without having any effect on their income. While we find this latter assumption implausible, we would note that they do *not* assume that DACA has any significant impact on these workers' willingness to be employed. Hence the CBO's scoring of S. 1615 implicitly agrees with our assessment that ending DACA would not remove a large number of low-skilled workers from the workforce.

estimates in the previous sections.

Since human capital and physical capital are complements, the failure to employ all of our human capital would hurt the suppliers of physical capital, low-to-moderate income workers. Opponents of DACA, displaying a tragic lack of understanding of how the economy works, argue that its elimination would "open up jobs for Americans." But as section 3.2 showed, its elimination would merely increase the competition for the kinds of jobs that tend to have an excess supply of workers, while reducing the supply of employable skilled workers in the areas where we have the most acute labor shortages. Overall, we find that eliminating DACA would be a lose-lose-lose economic policy, hurting these young immigrants, federal, state, and local government treasuries, the aggregate economy, and the incomes of low-to-moderate income workers.

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