

How Expensive Is Free College for States?



Campaign for Free College Tuition

Calculating the Return on States' Investments in Free College Tuition

The Campaign for Free College Tuition (CFCT) is pleased to present the following report detailing the estimated cost to each state of making their public colleges and universities tuition free. We commissioned this research to establish a base line for state policymakers to discuss appropriations and the eventual return that they might expect on such an investment. The report was made possible by a generous grant from the ECMC Foundation and authored by Mark Schneider, Vice President and Institute Fellow at the American Institute for Research (AIR) and a former commissioner of the National Center for Education Statistics.

As Mark makes clear in his paper, we still need more experience with the results of promise programs such as the Tennessee Promise that made their community colleges free, to more accurately estimate the revenue that a state might derive from the increased incomes college graduates will enjoy over their lifetime. One experience from the longest running promise program in the country, in Kalamazoo, MI, suggests the returns could be substantial. A [report](#) from the W. E. Upjohn Research Institute for Employment Research found that the Kalamazoo Promise produced a return on investment of 11.3%, based upon that state's tax structure and workforce skill levels, in the first ten years of the program. With free college tuition programs currently receiving considerable attention, we think it is time for state officials to consider making these type of calculations for their own state. We hope Mark's work in calculating the cost side of the return on investment formula will help jumpstart that process.

As a bi-partisan, 501c3 non-profit dedicated to making tuition free in all fifty states, we believe similar returns can be achieved by state leaders with the vision and courage to adopt properly structured promise programs for their own constituents. In the months ahead, we plan on providing further policy making aides and research to those ready to take on the most important public policy challenge of this century. Please visit our Policy Resource Center -- <http://www.freecollegenow.org/policy-center> -- for more information in the months ahead to assist your efforts.

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Campaign for Free College Tuition

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If states adopt tuition free colleges and/or universities, they will forego tuition revenues that students in those institutions now pay. The size of the foregone revenues will depend on the size of the student body and the level of tuition, whether or not a state adopts free tuition only for community colleges or for four-year schools as well, and whether or not the state phases in free college for just the entering cohort or offers it to all students. The below table estimates the tuition now being collected by states that could be foregone as a result of tuition free college.

The data this analysis is based on are drawn from the US Department of Education's Integrated Postsecondary Data System (IPEDS). IPEDS data cover all colleges and universities that participate in the federal Title IV student aid program, which includes almost all public institutions. However, to use IPEDS data for our purposes, certain calculations need to be undertaken—calculations that are built on several assumptions. As a result, the estimates reported in the following tables are just that—*estimates*—that approximate the foregone tuition revenues. They should not be taken as exact numbers.

Among the key decisions and consequences built into the calculations are the following:

- First, IPEDS reports all tuition revenues for each institution, combining graduate and undergraduate student tuition payments. Because free college will almost certainly apply to only undergraduates, total tuition revenues as reported by IPEDS are multiplied by the percent of student enrollment that is undergraduate. However, if, for example, tuition levels differ between graduate and undergraduate students or if large numbers of graduate students have tuition waivers that are not accounted for, the resulting estimates could be off.
- Further, the latest IPEDS data are from 2014. To estimate more current levels of tuition collected, the rate of increase in tuition for each campus between 2013 and 2014, the latest years for which IPEDS data are now available, was calculated. The College Board has shown that the rate of tuition change over the last few years has been relatively stable.¹ Therefore this calculated rate of change from 2013-2014 was applied to the 2014 tuition to estimate tuition collected in 2016 (the rate of change is compounded since these estimates are for a

¹ See Figure 6 in Trends in College Pricing. Available at <https://trends.collegeboard.org/college-pricing>

two year change). If the rate of tuition increase has changed, these estimates will contain error.

- Because many four-year campuses have large numbers of out-of-state students, and because states will likely not extend free tuition to them, the 2016 tuition revenues are multiplied by the percent of students who are in-state, as reported by IPEDS. If the concentration of in-state students has changed, these estimates will contain error.
- Free tuition could be phased in with the entering class. If so, losses that would begin when implemented with one class and would accumulate over time. We begin by reporting **first year estimates** for the incoming class, but over time that loss would accumulate as more cohorts entered. Of course, if a state eliminated all tuition across all students, regardless of their class standing, then the initial cohort estimates presented here would need to be increased.
- Therefore, in Table 2, we double the community college estimate of foregone tuition revenues and increase by a factor of 4 the foregone tuition revenues for the entering class of students at four year colleges and universities. Combining these two estimates approximates the total foregone tuition revenues a state may encounter if they implemented free college for all in-state undergraduate students in public institutions.
- Note that to the extent to which states impose limits on eligibility (for example by setting a minimum grade point average, full time attendance, or community service), the number of students participating in the program would decline as would the amount of Foregone Tuition.
- Finally, we have no real idea how many *new* students may enroll in public colleges and universities. We do know that these students would increase the burden on the state treasury and we present some data on the possible effects such transfer behavior may have.

Table 1 estimates the tuition that would have to be replaced for the entering cohort of community college and four-year IHEs separately and then combines those estimates to present total tuition that might be foregone if free college was applied to the entering class of all public institutions in a state, again using 2016 data.

Table 1: 2016 Estimated Tuition Loss, by State and by Level, Entering Cohort

| STATE | ESTIMATED FOREGONE TUITION ENTERING COHORT COMMUNITY COLLEGES | ESTIMATED FOREGONE TUITION ENTERING COHORT FOUR YEAR SCHOOLS | ESTIMATED FOREGONE TUITION ENTERING COHORT |
|-------|---|--|--|
| AK | \$407,000 | \$24,950,000 | \$25,357,000 |
| AL | \$60,500,000 | \$188,500,000 | \$249,000,000 |
| AR | \$101,500,000 | \$67,000,000 | \$168,500,000 |
| AZ | \$104,500,000 | \$203,750,000 | \$308,250,000 |
| CA | \$372,000,000 | \$1,055,000,000 | \$1,427,000,000 |
| CO | \$106,000,000 | \$250,000,000 | \$356,000,000 |
| CT | \$50,500,000 | \$82,750,000 | \$133,250,000 |
| DC | \$0 | \$5,325,000 | \$5,325,000 |
| DE | \$17,750,000 | \$1,835,000 | \$19,585,000 |
| FL | \$26,400,000 | \$417,500,000 | \$443,900,000 |
| GA | \$86,500,000 | \$282,500,000 | \$369,000,000 |
| HI | \$25,200,000 | \$27,500,000 | \$52,700,000 |
| IA | \$83,000,000 | \$86,000,000 | \$169,000,000 |
| ID | \$18,600,000 | \$48,750,000 | \$67,350,000 |
| IL | \$237,500,000 | \$244,000,000 | \$481,500,000 |
| IN | \$50,500,000 | \$287,500,000 | \$338,000,000 |
| KS | \$70,500,000 | \$108,750,000 | \$179,250,000 |
| KY | \$46,650,000 | \$152,500,000 | \$199,150,000 |
| LA | \$82,000,000 | \$177,000,000 | \$259,000,000 |
| MA | \$99,000,000 | \$165,250,000 | \$264,250,000 |
| MD | \$149,500,000 | \$149,500,000 | \$299,000,000 |
| ME | \$10,850,000 | \$30,750,000 | \$41,600,000 |
| MI | \$177,000,000 | \$542,500,000 | \$719,500,000 |
| MN | \$108,500,000 | \$129,250,000 | \$237,750,000 |
| MO | \$66,500,000 | \$168,750,000 | \$235,250,000 |
| MS | \$39,250,000 | \$63,500,000 | \$102,750,000 |
| MT | \$10,750,000 | \$41,000,000 | \$51,750,000 |
| NC | \$83,000,000 | \$257,500,000 | \$340,500,000 |
| ND | \$7,000,000 | \$25,750,000 | \$32,750,000 |
| NE | \$26,750,000 | \$53,500,000 | \$80,250,000 |
| NH | \$31,950,000 | \$28,000,000 | \$59,950,000 |
| NJ | \$197,500,000 | \$325,000,000 | \$522,500,000 |
| NM | \$23,300,000 | \$40,750,000 | \$64,050,000 |
| NV | \$6,850,000 | \$68,000,000 | \$74,850,000 |

| | | | |
|-----------|---------------|---------------|-----------------|
| NY | \$307,500,000 | \$375,000,000 | \$682,500,000 |
| OH | \$156,500,000 | \$480,000,000 | \$636,500,000 |
| OK | \$44,900,000 | \$136,500,000 | \$181,400,000 |
| OR | \$149,000,000 | \$135,000,000 | \$284,000,000 |
| PA | \$171,500,000 | \$156,250,000 | \$327,750,000 |
| RI | \$12,800,000 | \$24,325,000 | \$37,125,000 |
| SC | \$98,000,000 | \$129,500,000 | \$227,500,000 |
| SD | \$13,650,000 | \$27,500,000 | \$41,150,000 |
| TN | \$82,500,000 | \$183,750,000 | \$266,250,000 |
| TX | \$363,000,000 | \$792,500,000 | \$1,155,500,000 |
| UT | \$29,200,000 | \$121,000,000 | \$150,200,000 |
| VA | \$169,500,000 | \$322,500,000 | \$492,000,000 |
| VT | \$6,750,000 | \$25,500,000 | \$32,250,000 |
| WA | \$115,000,000 | \$255,000,000 | \$370,000,000 |
| WI | \$94,000,000 | \$197,000,000 | \$291,000,000 |
| WV | \$12,950,000 | \$58,000,000 | \$70,950,000 |
| WY | \$27,850,000 | \$5,425,000 | \$33,275,000 |

A state will likely face heavy political pressure not to phase in free college and make college free to all state resident students currently enrolled. Table 2 doubles the estimate of foregone tuition revenues from free community college and quadruples the estimate of foregone tuition revenues for four-year IHEs (from Table 1) and combines them to present a state-by-state estimate of total foregone revenues if free college was offered to all in-state undergraduates.

Table 2: 2016 Estimated Tuition Loss, by State, All Students

| ESTIMATED FOREGONE TUITION FOR ALL STUDENTS | | | |
|--|-----------------|-----------|-----------------|
| AK | \$100,614,000 | MT | \$185,500,000 |
| AL | \$875,000,000 | NC | \$1,196,000,000 |
| AR | \$471,000,000 | ND | \$117,000,000 |
| AZ | \$1,024,000,000 | NE | \$267,500,000 |
| CA | \$4,964,000,000 | NH | \$175,900,000 |
| CO | \$1,212,000,000 | NJ | \$1,695,000,000 |
| CT | \$432,000,000 | NM | \$209,600,000 |
| DC | \$21,300,000 | NV | \$285,700,000 |
| DE | \$42,840,000 | NY | \$2,115,000,000 |
| FL | \$1,722,800,000 | OH | \$2,233,000,000 |

| | | | |
|-----------|-----------------|-----------|-----------------|
| GA | \$1,303,000,000 | OK | \$635,800,000 |
| HI | \$160,400,000 | OR | \$838,000,000 |
| IA | \$510,000,000 | PA | \$968,000,000 |
| ID | \$232,200,000 | RI | \$122,900,000 |
| IL | \$1,451,000,000 | SC | \$714,000,000 |
| IN | \$1,251,000,000 | SD | \$137,300,000 |
| KS | \$576,000,000 | TN | \$900,000,000 |
| KY | \$703,300,000 | TX | \$3,896,000,000 |
| LA | \$872,000,000 | UT | \$542,400,000 |
| MA | \$859,000,000 | VA | \$1,629,000,000 |
| MD | \$897,000,000 | VT | \$115,500,000 |
| ME | \$144,700,000 | WA | \$1,250,000,000 |
| MI | \$2,524,000,000 | WI | \$976,000,000 |
| MN | \$734,000,000 | WV | \$257,900,000 |
| MO | \$808,000,000 | WY | \$77,400,000 |
| MS | \$332,500,000 | | |

How much more in state appropriations might be needed?

The next two tables estimate how much of an extra burden on state budgets could be incurred as students who might otherwise enroll in not-for-profit institutions choose tuition-free public institutions. Since students in private schools are not currently paying tuition there would be no losses in state ledgers (explored in the above table), but each student attending a public institution receives a level of support through state appropriations. The next set of tables looks at the added state appropriations that would be required to support 5% and 10% of not-for-profit students choosing public institutions instead of private ones.

The first table estimates what the added appropriations might be required if 5% and 10% of not-for-profit students transferred to four-year institutions (there are very few two-year not-for-profit institutions so most of these students are already in four-year schools). The second table estimates the appropriations if these same percentages of students entered community colleges. The added appropriations needed are substantially less because state appropriations for community colleges are far lower than for four-year colleges.

Assumptions and caveats:

- Some states, such as New York and Massachusetts, have a number of nationally well-known not-for-profit colleges. It is unlikely that a significant number of students admitted to, say, Cornell or Harvard would choose a free community college or public regional campus instead.

And many of the students in these name-brand institutions are not from the state in which the college is located. Consequently, the number of students in not-for-profit institutions that might even consider choosing a public institution may be overstated.

- Given that we cannot now estimate how many students might choose public institutions rather than not-for-profit private institutions, these tables should best be viewed as a caution that there could be large additional expenses that states may face if they adopt free tuition plans.
 - The only evidence about how many private college students comes from Tennessee, where private institutions have reported a decrease in enrollments of around 1%. The 5 and 10% estimates here may therefore be high². However, Tennessee Promise is open to students attending only two-year schools and most not-for-profit schools are four-year ones. This would suppress the number of private schools students who might be interested in switching sectors.
 - If states extend tuition free policies to four-year schools, the movement from the private sector could be much larger.
 - As a side note, almost all four-year public universities in Tennessee reported declines in enrollment, because the pathway from community college to four-year publics is widely viewed as legitimate. If this pathway becomes more common for private schools, then there could be more students taking advantage of “Promise” type programs, increasing the potential demand on state appropriations.
 - There is much speculation but not yet much experience with Promise, so the lessons we can garner from Tennessee are right now quite limited.
- These estimates are for the costs of a new cohort of students choosing a free public institution rather than a private one. Over time, the costs would increase as each new entering cohort increased the number of students in public institutions who might otherwise attend a private one. Since almost all private institutions are bachelor’s level, the base size of the cohort used in these estimates is calculated by dividing the total number of students enrolled in not-for-profit institutions by four, which is used as a rough estimate of what the annual cohort might be.
- These estimates assume that states would be able to support this new influx of students at the same level of appropriations as they are currently allocating.
- Local appropriations are **not** included in these calculations. These can be substantial for community colleges.

² On August 31, 2016, Georgetown University’s Center for Education and the Workforce released a report that estimates a 9-22 percent increase in enrollment at public colleges and universities, with a median projected increase of 16 percent.

https://www.insidehighered.com/sites/default/server_files/files/memo%20Clinton%20plan%20%20to%20ACE.pdf

Table 3: Estimate of Added State Appropriations, Assuming Move to Four Year Public Institutions From Private Not-for-Profit Institutions

| STATE | IF 5% OF PRIVATE NOT-FOR-PROFIT STUDENTS MOVE TO PUBLICS (ENTERING COHORT) | IF 10% OF PRIVATE NOT-FOR-PROFIT STUDENTS MOVE TO PUBLICS (ENTERING COHORT) |
|--------------|---|--|
| AK | \$62,000 | \$123,000 |
| AL | \$1,630,000 | \$3,259,000 |
| AR | \$1,226,000 | \$2,451,000 |
| AZ | \$206,000 | \$412,000 |
| CA | \$14,375,000 | \$28,749,000 |
| CO | \$43,000 | \$86,000 |
| CT | \$5,081,000 | \$10,162,000 |
| DC | \$7,189,000 | \$14,377,000 |
| DE | \$744,000 | \$1,488,000 |
| FL | \$7,473,000 | \$14,945,000 |
| GA | \$3,230,000 | \$6,460,000 |
| HI | \$868,000 | \$1,735,000 |
| IA | \$4,069,000 | \$8,138,000 |
| ID | \$2,531,000 | \$5,061,000 |
| IL | \$10,953,000 | \$21,906,000 |
| IN | \$4,357,000 | \$8,713,000 |
| KS | \$927,000 | \$1,854,000 |
| KY | \$2,065,000 | \$4,130,000 |
| LA | \$1,690,000 | \$3,380,000 |
| MA | \$14,935,000 | \$29,869,000 |
| MD | \$2,761,000 | \$5,521,000 |
| ME | \$1,189,000 | \$2,377,000 |
| MI | \$3,215,000 | \$6,429,000 |
| MN | \$3,314,000 | \$6,627,000 |
| MO | \$5,478,000 | \$10,955,000 |
| MS | \$876,000 | \$1,752,000 |
| MT | \$292,000 | \$584,000 |
| NC | \$9,915,000 | \$19,830,000 |
| ND | \$307,000 | \$613,000 |
| NE | \$2,909,000 | \$5,818,000 |
| NH | \$837,000 | \$1,674,000 |
| NJ | \$3,732,000 | \$7,464,000 |

| | | |
|-----------|--------------|---------------|
| NM | \$61,000 | \$122,000 |
| NV | \$63,000 | \$126,000 |
| NY | \$55,312,000 | \$110,624,000 |
| OH | \$4,690,000 | \$9,379,000 |
| OK | \$1,544,000 | \$3,087,000 |
| OR | \$1,243,000 | \$2,486,000 |
| PA | \$9,636,000 | \$19,271,000 |
| RI | \$1,951,000 | \$3,901,000 |
| SC | \$1,377,000 | \$2,754,000 |
| SD | \$290,000 | \$580,000 |
| TN | \$3,988,000 | \$7,976,000 |
| TX | \$11,202,000 | \$22,404,000 |
| UT | \$5,604,000 | \$11,207,000 |
| VA | \$5,657,000 | \$11,313,000 |
| VT | \$570,000 | \$1,139,000 |
| WA | \$1,307,000 | \$2,613,000 |
| WI | \$2,050,000 | \$4,100,000 |
| WV | \$375,000 | \$750,000 |
| WY | \$15,000 | \$29,000 |

Table 4: Estimate of Added State Appropriations, Assuming Move to Community Colleges From Private Not-for-Profit Institutions

| STATE | IF 5% OF PRIVATE NOT-FOR-PROFIT STUDENTS MOVE TO COMMUNITY COLLEGES (ENTERING COHORT) | IF 10% OF PRIVATE NOT-FOR-PROFIT STUDENTS MOVE TO COMMUNITY COLLEGES (ENTERING COHORT) |
|--------------|--|---|
| AL | \$34,000 | \$69,000 |
| AR | \$96,000 | \$191,000 |
| CA | \$76,000 | \$152,000 |
| DE | \$15,000 | \$29,000 |
| FL | \$102,000 | \$205,000 |
| GA | \$23,000 | \$46,000 |
| IL | \$16,000 | \$32,000 |
| IN | \$15,000 | \$30,000 |
| KS | \$14,000 | \$29,000 |
| LA | \$23,000 | \$45,000 |

| | | |
|-----------|-----------|-----------|
| MA | \$41,000 | \$81,000 |
| ME | \$16,000 | \$32,000 |
| MN | \$3,000 | \$6,000 |
| MO | \$18,000 | \$36,000 |
| MT | \$17,000 | \$34,000 |
| NC | \$51,000 | \$102,000 |
| NE | \$7,000 | \$14,000 |
| NH | \$6,000 | \$13,000 |
| NY | \$71,000 | \$141,000 |
| OH | \$42,000 | \$84,000 |
| PA | \$251,000 | \$503,000 |
| SC | \$18,000 | \$37,000 |
| SD | \$3,000 | \$6,000 |
| TN | \$29,000 | \$59,000 |
| TX | \$106,000 | \$213,000 |
| UT | \$75,000 | \$150,000 |
| VA | \$17,000 | \$33,000 |
| WA | \$46,000 | \$91,000 |

A final estimate: How many additional degrees might be awarded?

The largest set of data we have about how tuition free policies might translate into more graduates comes from Tennessee’s Promise program. But since that program is only a year old, the actual relationship between Promise and the number of new credentials awarded is speculative. With that in mind, here are some data from Tennessee to consider.

In the Fall of 2015, the first year of Tennessee Promise, the number of first-time freshmen enrolled in community colleges increased by about 25 percent (about 4,300 students). At present, the six-year community college graduation rate is about 30 percent. Applying this 30% graduation rate to the 4300 new students should yield roughly 1,300 additional credentials. (Note Promise has many more services to support students than in the past so the graduation rate should be higher—but that is speculation.)

Historically, about 25% of community college students earn a bachelor’s degree in 6 years. Applying the 25/75 bachelor’s/associate’s percent split, suggests that the first year of Promise should yield at least 325 new bachelor’s degrees and close to 1000 new associate’s degree graduates. However, since some of the new bachelor graduates may have otherwise started at a four-year campus (as noted

above, the starting class at most of Tennessee's universities was smaller than in previous years), the net number of new bachelor's graduates may be lower.

Clearly, we need more data from Tennessee and elsewhere to even begin to estimate the effects of free college on the production of new credentialed students.

Conclusion

Free college is clearly a politically appealing idea. To the extent to which free college increases the stock of better educated citizens and a more highly skilled workforce that can compete in the national and international labor market, it can represent a sound investment by states.

However, while free college may be free to students, it certainly is not free to taxpayers, who may have to cover millions upon millions of dollars in foregone tuition revenues that now help support public institutions. Moreover, we have no idea how free public college will affect the private not-for-profit institutions, which have been part of our higher education landscape for decades. To the extent that students leave these private institutions and flow into public ones, the costs of educating an expanding student body will create additional demands on the public treasury. We have presented estimates of how much states may forego in revenues depending on their choices implementing free college and we have presented estimates on the added appropriations that might be needed. But to repeat an earlier warning, these are estimates based on some reasonable assumptions—but we have little experience with the real effects of free tuition.

Currently, we have no idea about how much money the federal government will actually contribute to making college free (and what the federal government might ask in return). The purpose of these calculations is to give each state some idea of how expensive “free” is for them and thereby help taxpayers and state officials engage in a more informed discussion of this politically popular policy option.