

# Problems with Providing Free Tuition at Public Colleges

By James Sly

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## Introduction

One of the most prominent ideas designed to reform our system of higher education would provide enough new resources so that any student who was accepted would be able to attend a public college or university completely tuition free. This idea to provide free tuition for public colleges was first popularized by Bernie Sanders when he ran for president in 2016, and the idea has caught on with other politicians and is now one of the leading reform options that other politicians build off. This approach does have some advantages, where tuition at public colleges and universities have grown dramatically over the past decade, and would benefit from some new resources and subsidies being provided to them.(1) At the same time, the federal government has a poor track record when providing their own subsidies, where the two most well funded federal programs are Pell Grants and tax credits which research has shown has no effect on college attendance overall. Providing free tuition at all public colleges and universities would address both of these problems since clearly the cost of attending college would fall dramatically (though students would still have to pay for room and board), and by providing broad subsidies directly to institutions in a way that lowers their overall sticker price, this approach has been proven effective at encouraging more students to attend college.(2)

Unfortunately, there are two major problems with this policy strategy. The first problem is that making sure all public colleges across the country are completely tuition free is an extremely expensive proposition, and the any new money that does become available could be better spent on smaller, more innovative programs at the state level.(3) Accumulating the vast amount of new resources required for free tuition would be a difficult goal to achieve politically, and there are many other options that states could try which cost a lot less while also addressing the problems with our current system of higher education. Ramping up a new national program in the US that achieved mixed results when tried in Europe is probably less desirable than experimenting with less expensive proposals to see what works before devoting massive amounts of funding to a new effort at the national level.(4) The second problem is that over the long run, public colleges and universities would become completely dependent on government funding once they could no longer charge tuition, and historically government spending on education has been a slower growing revenue source.(5) If these schools did not have the option of raising tuition to compensate, then over the long term the whole system of higher education could end up chronically underfunded to the detriment of both students and the broader society. The rest of this policy memo deals with each problem in greater detail.

## First Problem: Any New Available Resources Would Be Better Spent by the States

If you look at the higher education proposals promoted by Bernie Sanders in his most recent presidential campaign, the total cost of those proposals would exceed \$200 billion a year. This includes a plan to forgive all student debt, which will not even be looked at here, but the other main proposal to provide free tuition at all public colleges and universities would ultimately cost about \$70 billion to \$80 billion a year in total new state and federal spending. This combined total represents more than what the federal government currently spends on higher education subsidies, and is similar to the amounts that the 50 individual states currently spend themselves.<sup>(6)</sup> If you assume that the federal government has unlimited access to infinite amount of revenue that is costless to raise, then it might make sense to pump a vast amount of money to make the federal subsidies for higher education dramatically more generous while taking away the ability of colleges to charge tuition since the government supply of funds would never run short.

The problem of course is that resources are limited and the federal government does not have infinite amounts of money to spend on higher education. In this case, state governments have access to a large number of promising programs that the federal government could fund with any new resources that become available in the future. As I describe in another policy memo on higher education (Sly 2020a), state governments spend money much more effectively than the federal government for all types of aid, but the federal government has a much easier time raising revenue, so it makes a lot of sense to have the federal government send more money to the states to spend on higher education rather than have the federal government spend it themselves.

Using newly dedicated federal revenue, states would have a broad array of policy options that could do a better job than providing free tuition at public schools. States could try sending more money public colleges so they can reduce their sticker price without forcing them to give up tuition revenue entirely. States could try experimenting with new merit based scholarships that do a better job encouraging students to graduate from college. States could provide more generous amounts of need based aid early on in a child's life that depend on lifetime income growing up rather than the income of your parents the year you go to school. States could also provide graduation bonuses designed to be spent on college for each student who receives their high school diploma.<sup>(7)</sup> Having the federal government provide new funding for any of these programs would reduce the cost of attending college, and therefore help with the college affordability problem, but the funding could be ramped over time as states learn what works best and what does not, so the total cost of these programs would not become overwhelmingly expensive right from the very beginning.

Taking the approach of devoting a vast amount of resources into one federally managed program when the government does not have a good track record of spending that money effectively is definitely a high risk strategy. Providing a nationwide program of free tuition at public colleges would deal with the college affordability problem much more aggressively, but the same amount of funds sent to the states would diversify the risk while still having a similar impact on college costs. It is true that this approach of free tuition has been tried in many European countries, but the results of those programs is somewhat mixed.<sup>(8)</sup> Overall, the US sends more students to initially attend college compared to most European

countries, but Europe has higher college graduation rates overall, so the percent of young people who earn a college degree is about the same. At the same time, European students spend much less out of pocket in order to get their education, but this also leads to dramatically lower levels of spending on a student's education overall as well, which then leads us to the second problem with this proposal.

## Second Problem: Eliminating Tuition at Public Colleges Leads to Chronic Underfunding over the Long Term

In the short run, any plan to reform higher education that leads to dramatic cuts in higher education funding would be wholly unacceptable, so a plan to provide free tuition at public colleges is only going to pass if it is generous enough to keep overall spending the same after colleges lose all their tuition revenue. The chronic underfunding issue is then not a short run problem but a long run problem. The simple argument to this effect tells us that government sources of funding tend to grow very slowly over time, and if colleges do not have the chance to raise tuition to offset that slow growth, then overall spending on higher education could deteriorate considerably over time as well.<sup>(9)</sup> Providing free tuition at public colleges then risks this chronic underfunding the longer it lasts, and even if students might still be able to get a decent education, the US might lose a significant source of research funding as undergraduate tuition often serves to cross subsidize a lot of academic research. If this problem persists over several decades, the US might even lose their place as the top producer of scientific and technological discoveries, and give up the institutional strength that provides our economy and society with considerable advantages compared to other countries.

The sophisticated form of this arguments tells us that there are two very different funding structures for K-12 and higher education, and if you want to look at what would happen to our higher education system if we adopted free tuition at public colleges, then you need to look at what has happened to our own K-12 system of education and the European higher education system over the long term. One way to approach this problem is to look at the distribution of spending according to how well a student performs in school. In our current higher education system, our poorest performing students get no funding at all since they do not attend college or have already dropped out. Our best students, however get extremely well funded educations worth around \$60,000 a year.<sup>(10)</sup> If you were to make a graph of this distribution, it would likely be represented by a 45 degree line that starts at zero in the middle of the distribution and reaches a relatively high level of \$60,000 when it reaches the end of the distribution on the right. Alternatively, if you look at the same graph for K-12 education in the US it is basically a flat line set at around \$14,000 for the entire distribution, since most everyone in K-12 goes to public schools, and everybody gets the same amount of funding from the state to spend on their education.<sup>(11)</sup>

The advantage of the K-12 system is that it increases access and provides more funding for those at the bottom of the distribution who do not do very well in school. The disadvantage of the K-12 system is that it spends dramatically less on those at the top of the distribution who do perform well in school. One way the K-12 system does this is by denying private schools any access to government subsidies. This makes private colleges dramatically more expensive and leads to a lot of the best students getting funneled into public schools that spend less on their education, while also putting a lot of price pressure on private schools to charge less overall so they can compete with the public schools that charge no

tuition. Even for those students who do well but still go to public colleges, taking away tuition as a source of revenue suppresses the amount spent on their education as well. The average amount spent on a student's K-12 education is around \$14,000 a year, whereas colleges spend an average of around \$32,000 a year on each student it educates.(12) Of course, this \$32,000 figure is an average overall, where students going to community college will get substantially less than that (perhaps around \$14,000 a year), and those going to elite private schools will get much more than that (perhaps around \$60,000 a year). Overall though, eliminating tuition as a revenue source and relying solely on government funds does suppress the overall level of spending at public schools by a considerable amount.

If you look at the experiences of other countries, many of whom charge much lower amounts for tuition, then you also find this chronic problem of underfunding. Most European countries spend about \$10,000 to \$20,000 a year on a college student's education, which is dramatically below the \$32,000 level that the US spends on their students.(13) Again, European colleges still provide students with a quality education as measured by international standardized tests, but European colleges and universities do significantly less research.(14) If you look at rankings of the research productivity of universities around the world, the US strongly dominates those rankings, providing more universities in the top 50 research institutions than the rest of the world combined.(15) If you look at the experience of European systems of higher education, then you can also see that the limited revenue that governments have available to spend causes countries to impose strict enrollment caps that denies any college subsidies for the low end of the distribution of students as well.

This then puts us in a difficult position, because looking at the K-12 system of education shows that offering free tuition at all public schools suppresses spending at the top of the distribution of students by diverting students away from private schools that spend more on a student's education. You can also see the chronic underfunding problem in the middle of the distribution in both the K-12 example and the European example since both systems spend dramatically less money on the average student going to public schools. If you look at the system for the lower end of the distribution, then the European example shows that this can lead to lower spending too because of the enrollment caps enacted to make the system more affordable.

Again, in the short run, the only way a free tuition plan for public colleges can pass is if it is generous enough to keep the overall level of spending on higher education about the same. Long term, however, the experience of our own K-12 system and the higher education systems in Europe show that this puts funding pressure at the low end, the middle part, and the high end of the distribution of students based on how well they perform in school. That means whatever short run advantage you get from making college more affordable more quickly, you lose out in the long run by suppressing the amount spent on higher education for everyone. If this goes on too long, then you risk losing a lot of resources spent on academic and scientific research, and the US could lose its ability to stay at the edge of the technological frontier, allowing other countries to take our place at the top. A better approach would find ways to increase spending at the low end of the distribution without sacrificing the spending at the high end of distribution at the same time.

## Conclusion

It is important to start by pointing out that a plan to provide free tuition at all public colleges would offer a couple of key advantages. It would quickly and dramatically address the college affordability problem by pumping enormous amounts of new resources into the system, while also having the federal government spend more on programs that have shown to be effective in encouraging more enrollment in college, rather than have them spend more on existing programs that have been shown to be ineffective at doing the same thing.

If you assume, however, that there are new resources to spend on higher education, then the money could be spent in a more effective and less risky fashion by having states experiment with a variety of promising alternatives, including having them give public colleges more aid but let them continue to charge tuition, which is what states currently do. This would be a better strategy than devoting all the new money to one program run by a federal government that has proven themselves ineffective at spending money on higher education in the past. This is especially risky since the one program that all the money is going into has had generally mixed results when tried elsewhere, where if you look at the K-12 and European educational systems, you find that this would likely lead to a chronic underfunding problem over the long run for the entire distribution of students. This problem might not be apparent right away, and students might still be able to get a quality education in college, but the extra research productivity that gets cross subsidized by undergraduate tuition might become severely diminished, and the US might lose its spot at the top of countries according to number of scientific and technological discoveries they produce.

If the same advantage can be provided by sending the new money to the states to spend, and you do not have to worry about having the US lose its technological edge over the long run, then perhaps risking massive amounts of money on a single federally run program would be ill advised. It might be better instead to focus on innovation at the state level for programs that provide subsidies for higher education, and then ramping up the ones that do work as quickly as possible, so the US can maintain its edge in the quality of its college and universities when it comes to producing valuable research, while also addressing the problem of college affordability at the same time.

## End Notes

#1 – According to the Center on Budget and Policy Priorities (Mitchell et al 2019), tuition at 4 year public colleges and universities is up 37% from 2008 to 2018, while on average states are spending about 13% less per student.

#2 – A summary of the literature on the effects of different higher education subsidies can be found in Dynarski and Scott-Clayton (2013) and also in Sly (2018).

#3 – The New York Times estimates that eliminating tuition at all public colleges and universities would cost about \$79 billion a year using data from the Department of Education. In his 2020 proposal, Bernie Sanders uses a slightly lower estimate and proposes paying for this by offering states \$48 billion in aid if they provide \$24 billion in revenue themselves and also agree to eliminate tuition at all public colleges and universities at the same time. His plan would also include some requirements to prevent states from spending money on merit based aid, administrator salaries, and non academic buildings like football stadiums (Golshan 2019). Since public colleges and universities would be losing all their tuition revenue, states would have little opportunity to experiment with new programs, since the new money would likely need to be sent directly to public colleges in order to fill that new financial hole.

#4 – In general, Europe spends considerably less per student when they were enrolled in college. In 2016, the US spent about \$31,600 per student per year on their college education, compared to \$10,000 to \$20,000 for most of the European countries listed in the data. The only country besides the US to spend significantly more than \$20,000 was Sweden, who spent \$25,300 per student (NCES 2020). European universities also produce much less valuable research, where if you look at the top 50 global universities according to US News and World Report based on research and reputation, the US has 29 schools on this list compared to Europe which only has 12 universities. Among those 12 top European universities, 6 were located in the UK which currently does not provide free tuition for their students at public colleges.

#5 – State spending on higher education per student has not only grown very slowly from 2008 to 2018, but actually shrank in 41 states and by 13% on average overall across the entire US. Over approximately the same time period, federal spending on Pell Grants has increased by 35% from \$21 billion in 2008-2009 to \$28 billion in 2018-2019 after adjusting for inflation, which is faster than the growth of the economy. This reinforces the observation that states have a lot more difficulty raising funds to spend on higher education than the federal government. If public colleges and universities were to get funding from both state and federal sources, even if federal spending grew faster than the economy, the overall level of revenue growth from the government might not keep pace due to declines in state spending.

#6 – Vox reports that Bernie Sanders' proposals from the 2020 presidential campaign would cost \$2.2 trillion over 10 years, or over \$200 billion a year (Golshan 2019), though this includes not only his plan to offer free tuition at public colleges and universities but also his plan to forgive all student loan debt among other ideas. See end note #3 for estimates of how much it would cost to provide free tuition at all public colleges and universities. In my own paper on higher education subsidies (Sly 2018), I find that the federal government spends about \$30 billion on Pell Grants and \$30 billion on tax credits for a total of \$60 billion a year. In this same paper, I report that state governments spend about \$55 billion a year on institutional aid, about \$10 billion on need based aid, and less than \$5 billion on merit aid for a total around \$70 billion. Since the free tuition at public college and universities would cost about \$70 billion to \$80 billion a year, this is more than the federal government spends on higher education subsidies, and similar to what the states currently spend.

#7 – Providing institutional aid directly to public colleges while still allowing them to charge tuition is what states have been currently spending the most money on right now to some success. Merit based

aid has been a new source of innovation in higher education subsidies over the past 20 years and I propose my own merit aid program based on the Kentucky model for Minnesota in a separate policy memo (Sly 2020b). Providing students with aid early in a child's life that gets topped up by the government each year when your family income is low is something Canada has been doing for quite a while (Sly 2020c). Providing a graduation bonus is not something that has been tried broadly anywhere, but appears promising as a way to provide universal sources of college aid in a way that is also extremely transparent.

#8 – See end note #4 for a discussion of the mixed results of the European higher education system.

#9 – See end note #5 for an analysis of state and federal spending trends on higher education over the last decade.

#10 – The average tuition at an Ivy League school was about \$57,000 for the 2019-2020 school year.

#11 – According to the National Center for Education Statistics, the US spent on average about \$13,600 a year per student for their primary and secondary education in 2016 (NCES 2020).

#12 – See end note #4 for a discussion of the average amount spent per student in college in the US, and see end note #11 for a discussion of the average amount spent per student in primary and secondary school.

#13 – See end note #4 for an international comparison of the average spent per student on a college education between the US and Europe.

#14 – According to an international survey of adult skills conducted by the OECD, also known as the PIAAC, about half of the European countries did better than the US on this test and about half the European countries did worse, indicating that as a whole Europe's colleges do produce similar levels of skills in adults as US colleges.

#15 – See end note #4 for a discussion of the relative research output of US and European universities.

## References

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