Center for Research On the Wisconsin Economy
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Fetzer Initiative on Economic Opportunity Policy Brief

Unfreezing In-State Tuition

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Abstract

The UW-System faces price controls like none of its peers. This policy brief provides some background for this freeze. It brings the best available evidence to bear on returns to college, investing in the UW-System, and college debt. The UW-System is a critical part of the State of Wisconsin and its significance will continue to rise in an era when the returns to education are at a historic high. While the freeze and the ensuing budget cuts have forced universities to be even more efficient, there are signs of the distortions associated with the state-imposed tuition freeze. It is difficult to maintain a quality University system without state residents paying for modest increases in tuition. This policy brief reviews economic arguments behind removing the freeze on in-state tuition.

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Historical Background on the Tuition Freeze

"... if price is restrained below the market-clearing equilibrium, other forms of competition will become more significant. Political power or other costly means of competition for the goods will decide who gets more and who gets less."

Armen Alchian and William R. Allen, Exchange and Production

The UW-System operates under price controls that are not faced by any of its peers. The tuition freeze was a response to what may be termed "*Reservegate*". In 2013, the UW System had one of its most embarrassing moments when members of the state legislature discovered that the System held $1 billion in reserves (though unrestricted reserves, which are funds available for general expenditures were $648 million) while simultaneously requesting tuition increases. From a budgetary and relationship standpoint, this has proven to be extremely costly. The reserves represented a substantial sum relative to the UW System's budget. Making matters worse, the UW Administration did not have an immediate clear response at the Joint Finance Committee meeting on what the reserves were intended for. While the University later took the view that the reserves were mostly earmarked for planned expenses in the future and that they were in line with peer institutions, members of the state legislature felt that they were not forthcoming and deliberately hid this information. To them, the high level of reserves was the result of rapid escalation of tuition in the years prior to the freeze. The University charged tuition dollars that were not needed for current operations and increased tuition at an annual rate of 5.5% each year between 2007-08 and 2012-13. All of this resulted in a breakdown in trust and the UW-System receiving a substantial budget cut and an eight-year tuition freeze.

The previous UW Administration could have spent down some of these reserves, especially the tuition reserves. A forward-looking Administration could have used them for much-needed investments in key areas of student demand (Computer Science, Engineering, STEM, and high growth areas). An effective organization builds reserves during good times for use during lean times. The irony is that if the UW System had invested in high priority areas by drawing down its reserves, been on top of its balance sheet, and articulated the need for reserves, it could well have had more resources today and been in better financial condition. Instead, this episode created the misconception among state residents that the UW System had more resources than it knew what to do with, and that its programs were unworthy of additional investment. While the tuition freeze may have come about regardless of the tuition reserves, the reality is that it made matters easy politically to not just freeze tuition but also give the UW System a substantial cut. In the rest of this policy brief, I review the best available evidence and argue that it is good public policy to remove the state-imposed tuition freeze and transfer control of this decision back to the UW System Regents.

There is a substantial lifetime benefit from a college degree

Available estimates point to a substantial benefit from college education over one's lifetime. A careful calculation from Avery and Turner (2012) finds that the average lifetime value of a college degree net of tuition and opportunity costs has increased from around $200,000 in 1965 to about $600,000 in 2010 for men, and from $100,000 to about $400,000 for women. In 2010, the average American who graduates from college could expect to earn $500,000 more in lifetime income net of college costs over graduating with a high school diploma.

Present Discounted Value of College Degree Net of Tuition, 1965–2010

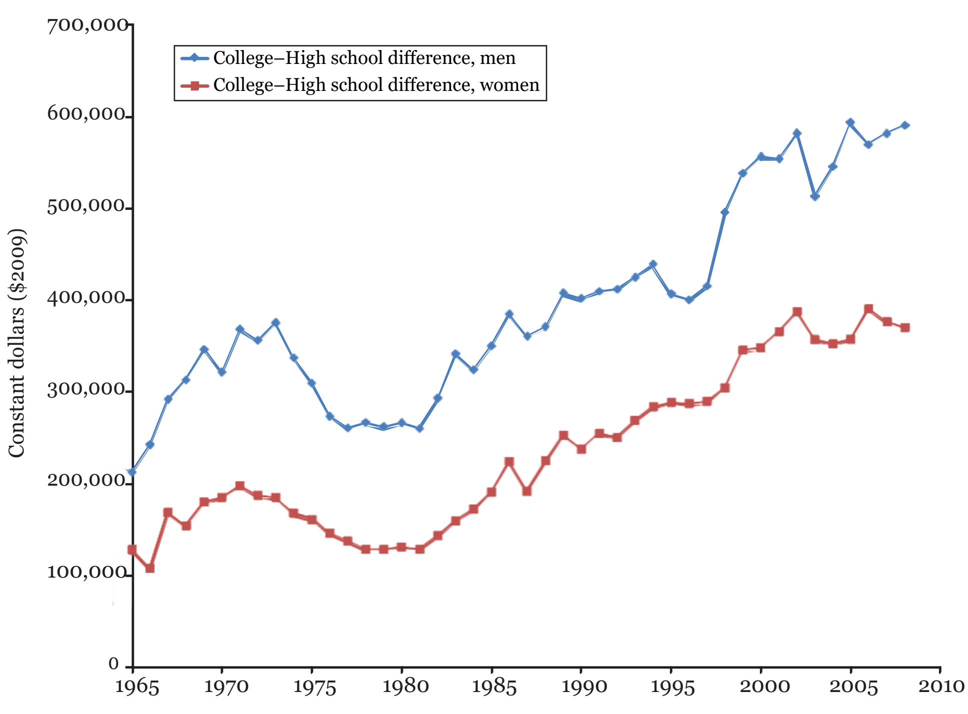

Figure 1 (Source: Avery and Turner, Journal of Economic Perspectives, 2012) plots the difference in the present discounted value of lifetime earnings between college and high school graduates.

A commonly touted argument is that decades ago, college students in the United States did not face mounting debt and that college was significantly cheaper than today. While this is true, Figure 1 clearly suggests that the net benefit from college was significantly smaller (about half a million smaller on average). While students today graduate with more debt on average than their parents, graduates now enjoy a substantially higher return to a college education than their parents. The average college student who graduates college today with debt is significantly better off than his or her parent who graduated debt free decades ago.

Interestingly, even when one controls for the fact that the average student who gets admitted into college is not randomly drawn from the population, researchers find a high return to college. Zimmerman (Journal of Labor Economics, 2014) compares students with grades just above a threshold for college admission with those just below. After accounting for all direct and indirect costs to students and society (including the deadweight loss of taxation in raising the subsidy for a public university), Zimmerman finds that, for those academically marginal students, the net return to college admission is over $26,000. The internal rate of return, the discount rate at which the net return will be zero, is at least 13.5%, well above the interest rate for education loans.[2]

Student loan debt is much smaller than is widely perceived

A Federal Reserve Report on the Economic Well-Being of U.S. Households in 2016 finds that among respondents who have at least some debt outstanding for their own education, the average debt burden is $36,299, and the median debt is $19,000. Among those who have borrowed for their own education, 44.3% have paid off their loans, 45.4% have outstanding debt but are not behind, and only 10.3% are behind.

A recent paper by Looney and Yannelis (Brookings Papers on Economic Activity, 2015) conclusively shows an important link between future earnings and borrowing. They match records on federal student borrowing with borrowers' earnings from tax records. This rich dataset contains detailed information about student borrowing, the college they attended, amount repaid and earnings after college. They find that borrowers at for-profit and community colleges earn low

[2] The interest rate for direct unsubsidized loans first disbursed between July 1, 2017 and July 1, 2018 is 4.45% for undergraduates and 6% for graduates and professionals. See https://studentaid.ed.gov/sa/types/loans/interest-rates

wages. Most importantly, half of the increase in borrowing between 2003 and 2013 is driven by increase in borrowers at these colleges.

Their analysis suggests that to the extent there is a crisis, it is concentrated among "nontraditional" borrowers who went to for-profit schools, two-year institutions and certain other nonselective institutions. These borrowers as "nontraditional" because they tend to be older, often enroll less than full time, and are living independently of their parents. As for-profit enrollment rose from just four percent of undergraduates in 2000 to eleven percent in 2010, borrowing by their students also increased. As these students entered repayment, defaults rose. Their analysis shows that for-profit schools account for 44 percent of defaults in recent years. Borrowers from four-year colleges, by contrast, tend to earn more out of college and much more likely to pay back their loans.

Completing a four-year degree results in lifetime earnings rising by $500,000. <u>Would society feel as bad for a 25-year-old who inherited a home worth $500,000 that carried with it a $36,000 mortgage?</u> We do not consider that a crisis, just as we would not consider an investment project with an internal rate of return above 13.5% a bad one when the project can be financed with a much lower interest rate. The distinction is that a home is much more liquid and can be sold under financial hardship, but a college education cannot be. The widely cited *New York Times* story about a 26-year-old graduate from New York University struggling with nearly $100,000 in student loans is not common but instead an extreme exception.[3] Sadly, this is a narrative that the media often cannot resist. If college debt were indeed a widespread issue, the appropriate response is to allow for more flexibility in loan repayment for those under financial hardship. The optimal response is most certainly not to lower the costs of college for everyone, including those who will eventually be employed in well-compensated jobs. And the optimal response is most certainly not to freeze tuition for in-state students who gain substantially from college.

[3] https://www.nytimes.com/2010/05/29/your-money/student-loans/29money.html

Lack of access is not a big impediment to attending college

Advocates of the tuition freeze argue that low posted prices encourage students to attend college. Poor families appreciate the distinction between posted prices and true prices. The true price of attending college is smaller for children from poorer families. The notion that lack of access or the inability to borrow against future income prevents children from low-income families from attending college has been debunked by Nobel Laureate James Heckman in a series of papers. His work demonstrates that fewer than 8% of families are constrained. Only a very small minority of Americans would like to attend college but are unable to do so due to financial considerations. A critical finding of his work is that high school graduates from low income families are less likely to attend college, not because they cannot secure enough loans for college, but mainly because of fewer investments in their human capital at younger ages.

If the inability to borrow affects very few families, why reduce tuition for all to benefit a minority few? Even if one were to believe that borrowing constraints (or lack of college access) impede low income families from attending college, the response is not to lower tuition for all students, but rather to provide targeted need-based financial assistance to the needy few. An alternative is to structure income-contingent loans. The bottom line is that the tuition freeze has not improved access and there are more efficient ways of improving access than by freezing tuition.

College costs rise primarily due to rising premium on skilled labor

Since 1960, the total cost of educating a college student has risen at roughly the same rate as per capita GDP. While sticker prices have grown faster than GDP per capita, tuition net of financial aid has risen at the same rate as GDP per capita. What has caused net college tuition to rise as the same rate as incomes? Some place blame on increased federal support for higher education and the proliferation of subsidized college loans while others point to increases in administrative costs as possible explanations for the rise in college tuition. But one of the most important reasons why college costs so much is the rising price of skilled labor.

Prices of different goods and services rise at different rates. The main cost for a university is skilled labor, and the cost of skilled labor has risen at a much faster rate than inflation in the last 50 years (which is also the reason why parents are willing to pay so much to send their children to elite colleges where they perceive an even higher return). Consequently, the cost of educating a student has risen faster than inflation and has roughly kept pace with GDP per capita. The primary driver of the cost of college is the rise in wages of highly educated workers *outside* the education sector.

The skill premium (the return to obtaining a college degree over a high school diploma) has risen substantially in the last few decades and this is the most important factor accounting for the rise in college costs. An educational institution has a very different "production function" than, say, a manufacturing plant. The latter would use capital as well as skilled and unskilled labor. By contrast, the main input into higher education is skilled labor. The rising premium on skilled labor puts upward pressure on costs which leads colleges to pass that on to students much like any business would. This leads to a higher rate of inflation in college costs than the CPI. This phenomenon is referred to as Baumol's *cost disease*. In a recent paper, Jones and Yang (Journal of Labor Economics, 2016) show that the ratio of college expenditures per student to GDP per capita has risen from 0.338 in 1961 to 0.415 in 2010. The primary driver is the rise in the relative productivity of college educated workers outside the education sector, which raises the relative wage of high skilled workers and the cost of college relative to GDP per capita. High skilled workers are used more intensively in the education sector than other sectors. Without the rise in relative productivity, and the resulting increase in relative wages of high skilled workers, the cost of college would have increased at a much slower pace than GDP per capita.

College is partly consumption, partly investment

While the investment value of college is significant, college has a rather substantial consumption component to it. College is fun! UW-Madison was recently ranked the top beer drinking school by The Princeton Review. College has a substantial social component to it and college students continue to meet their spouses on campus. Over the last several decades, this component of college has increased. While there are good reasons one might call for state support for financial aid, laboratories, classrooms etc., it is not clear why the taxpayer ought to subsidize the consumption component of college. Great facilities, dorms etc. are important for any major university in order to compete with the marketplace. At UW-Madison, while alumni contributions as well as self-assessed student fees paid for buildings such as the student union, college students get to enjoy these and other facilities.

But just as one would argue that a consumer ought to pay to enjoy an experience at a movie theater or any other service from which he or she receives a private benefit, it is only fair that in-state students pay for such amenities they get to enjoy during their time in college.

Data from the Delta Cost Project reveal that over the past 15 years or so, the average share of spending on instruction across all institutions has declined. While the shift of resources away from instruction has not been dramatic, it does seem that spending patterns reflect changing priorities. The report suggests that increases in spending account for a relatively small fraction of tuition inflation. Between 2000 and 2010 the average tuition for bachelor's degree programs increased by 30 percent. During that same period, spending per full-time student on all core activities (including instructional and non-instructional) increased by only 11 percent. Since a great deal of the media as well as policy discussions surrounding higher education is focused on broadening access, it is not surprising that spending on amenities at college campuses sometimes generates negative feelings. However, it is important to recognize that there is nothing inherently wrong with bundling amenities and instructional services.

Research (Jacob et. al. 2018, Journal of Labor Economics) finds that most students value amenities and are willing to pay for them. Their analysis confirms that colleges respond to this preference for amenities by increasing spending on amenities. This result reflects the fact that students and parents have a rational preference for maintaining high levels of consumption during college. Recent research (NBER working paper 26334 by Gong et. al 2019) goes even further and estimates the consumption value of college. They analyze data from a panel which follows students from Berea College, a four-year liberal arts college in central Kentucky. Their results suggest that a substantial consumption value of college exists among Berea students, with the average annual value ranging from $9,900 to $11,600. Incorporating these additional consumption benefits of college increases the return to college substantially. A reasonable guess is that UW-Madison offers even more consumption value to its students. If so, the consumption value of UW-Madison is by itself sufficient to compensate for in-state tuition!

Funding the Freeze does not represent a long-term solution

The tuition freeze has bipartisan support owing to its popularity with voters. What consumer would possibly want to pay more for any product or service? An alternative that has emerged is that taxpayers fund the tuition freeze. Waiting *exclusively* for additional resources from the state in the hope that the state "funds the freeze" in perpetuity, or even in the medium run, is unlikely to be an effective strategy for a variety of reasons:

1. National trends suggest that in most states, funding for health care has displaced funding for higher education.
2. In Wisconsin, additional funds for the UW System ranks low relative to other issues. According to the Marquette Law School Poll conducted in October of 2018, only 2% of likely voters said that the UW System was the most important issue. Health care, K-12, jobs, roads, tax cuts, and prisons dominated additional funding for the UW System.
3. Additional general purpose revenue (GPR) funding does not offer a *permanent* source of funds. It offers a short-term two-year solution until the next biennium, by which time the economy may enter a recession placing further strain on state finances and reducing funding for the UW System.
4. State funding and tuition increases are not mutually exclusive. As the Board of Regents and the UW System strongly advocate for additional funding for the UW System, they need to be given the flexibility to raise in-state tuition in campuses where there is excess demand for seats.
5. Finally, given the substantial returns enjoyed by in-state residents who go to college, it is only fair that they contribute to some of the costs associated with getting a good bargain rather than off-loading *all* of the incremental costs onto others including taxpayers who don't go to college.

There are good reasons why state governments subsidize higher education. It promotes equality of opportunity as well as efficiency. Left to its own devices, the market will tend to provide too little education given the presence of knowledge spillovers. This is the notion that the benefit to society from educating individuals exceeds the benefit to the individual.

Even Nobel Prize winning free-market economists from Chicago concede that in the market for higher education, absent state subsidies, private markets will not lead to an efficient outcome.[4] Individuals, left to their own devices, will invest too little in education since they do not necessarily internalize the impact of their education on society. Hence state support for higher education improves efficiency and equity– a policymaker's dream! While some subsidy is clearly warranted, the important question is how large these subsidies ought to be.

Is the State subsidy to UW-Madison justified? The state of Wisconsin contributed $445 million to UW-Madison's budget in 2017-18. How would one value this important contribution from the State? One way to value the extent to which the State of Wisconsin subsidizes UW-Madison is to consider the following hypothetical. Imagine we were to charge all in-state students the higher out-of-state tuition rate (the assumption is that UW-Madison would be able to find enough students to fill these slots – a reasonable assumption). Consider the following:

a. In Fall 2017, 3,746 Wisconsin residents and 594 Minnesota Compact (who pay a slightly higher tuition) freshmen enrolled at UW-Madison resulting in a total of 4,340 students paying the lower in-state tuition rate.
b. The difference in tuition between in-state and out-of-state tuition in 2017-18 is $24,250 for the academic year.
c. The average in-state undergraduate student takes 4.07 years to graduate
d. The product of items a, b and c above is $428 million.

The value of the subsidy provided to UW-Madison in-state students is $428 million. This is a simplistic calculation which ignores several details such as effective prices (tuition less financial assistance), payments made by graduate students, summer tuition revenue and many other finer points. This calculation under-estimates the subsidy to in-state students since out-of-state tuition is also below market price. That said, the salient message is the following and helps place the State of Wisconsin's important contribution to UW-Madison in perspective. To a first approximation, <u>the contribution by the State of Wisconsin to UW-Madison is just sufficient to offset the differential cost of an out-of-state student relative to an in-state student</u>. This is an important contribution that helps state residents send their children to a great university at a substantially lower price than that

[4] Robert E. Lucas Jr. emphasizes knowledge spillovers in the production of human capital, while Gary Becker argues that children cannot be held responsible for debt undertaken by parents on their behalf. These "frictions" in the functioning of the private market for education calls for some form of intervention to move the economy to an efficient allocation.

paid by their out-of-state counterparts. But it is important to remember that state residents who are able to attend UW-Madison at a substantially lower price receive a large *private* benefit in the form of significantly higher lifetime earnings. Viewed from this perspective, the State of Wisconsin currently provides virtually NO subsidy to UW-Madison itself (though it is very important to recognize that substantial investments over the last several decades built this great university today). Rather than provide a subsidy to UW-Madison the institution, the existing subsidy is tantamount to a voucher given by the state to residents of Wisconsin, and this voucher entitles state residents who send their children to UW-Madison to pay the lower in-state rate.

The UW System has been doing everything it can to tout the spillovers or externalities arising from higher education. This is important to do despite the fact that Wisconsin residents do not place the same priority on higher education funding that they did many decades ago. But so long as we believe that the UW System deserves additional investment, *both* state funding and in-state tuition need to be a part of the long-term funding mix. To pretend that the state can or will fund tuition freezes in perpetuity is a seductive and dangerous strategy to pursue. It does not offer the UW System a diversified revenue stream nor does it a permanent solution.

Wisconsin's Growth and UW System's Growth are Interrelated

Some question the UW-System's desire to expand through higher tuition, general purpose revenue, or other sources. When Wisconsin's families are managing with a fixed budget, why can't the UW-System "manage" with a fixed budget, they ask?

a. First, it suggests an acute misunderstanding of how growth occurs for any entity. To grow, one needs to invest. This is true whether the entity is a country, a state, a firm or an individual. The UW-System is no exception.

b. Second, it raises the question, is the UW-System worthy of the investment? After all, the State of Wisconsin has numerous choices when it comes to investing taxpayer dollars (roads, K-12 education, etc.). The answer is a resounding YES. Regardless of how the impact of the UW-System on the State is measured, the economic impact is large. While imperfect, these multiplier effects that measure the UW-System's impact, and especially those of research institutions that generate spillover effects on their neighboring areas, are much larger than the impact of pretty much any other alternative use of scarce taxpayer dollars.

c. Third, if the UW-System is indeed worthy of additional investments, the relevant and important question is who exactly should pay for this investment? Should it be the State (GPR), in-state students (tuition), out-of-state students (tuition), alumni, UW-System campuses (creation of new programs and more entrepreneurial activities), or capital markets (bonding authority for building projects)? This is a difficult question and the answer is the outcome of a political process.

Peer institutions are investing and expanding instructional staff

For the State's economy to grow at a faster rate, it is important to recognize that if these critical investments are not made, especially at a time when other universities are making these investments, the State of Wisconsin is sure to fall behind. The tuition freeze has had a considerable impact on economic activity at UW-Madison. It is instructive to compare UW-Madison with the flagship campuses at Michigan and Minnesota.

Growth from 2012 to 2017

	Tuition	Instructional Staff	Enrollment
University of Michigan-Ann Arbor	1.13	1.14	1.12
University of Minnesota-Twin Cities	1.06	1.05	1.12
University of Wisconsin-Madison	1.00	1.02	1.13

Between 2012 and 2017, undergraduate enrollment grew by a similar amount in all three institutions (data from IPEDS, NCES). And while tuition was flat in Wisconsin, it grew by a modest 6% at the University of Minnesota and by 13% at the University of Michigan. And while instructional staff grew by 13% in Michigan and 5% in Minnesota, it grew by only 2% in Wisconsin. Larger class sizes and an inability to grow at a fast-enough pace in high demand areas is one of the many negative consequences of a tuition freeze. Diminution of quality and reduced research activity, which eventually leads to loss of research support as well as ranking and reputation, are other consequences of a tuition freeze.

Shared sacrifice important for UW-System to function seamlessly

Indeed, the idea of shared risk is one of the unique features of the Wisconsin Retirement System which led to its success. The notion that the UW System does not care about access to education is untrue. For example, earlier last year, UW-Madison unveiled Bucky's Tuition Promise which makes UW-Madison tuition-free for Wisconsin students whose family income is below the median. At UW-Madison, <u>a tuition freeze in the face of Bucky's Tuition Promise benefits middle and high-income families and not poor families</u> especially since children from wealthier families are much more likely to attend college.

Years of tuition freeze paired with budget cuts have forced the UW System to be even more efficient and accountable to Wisconsin residents and taxpayers. In particular, UW-Madison is doing more to allocate resources based on credit hours and students served; some departments have developed income-expense balance sheets; and programs across the UW System are embracing opportunities to generate additional resources by launching innovative educational offerings. While there are numerous positive changes all across the UW System, there is also widespread concern about the long-term health of the institution.

We are in this situation due to punitive measures arising from *reservegate,* the result of years of tuition increases that were not needed/used for current operations. The reserve (a concept that is frequently misunderstood) is really the right to spend money outside the biennial budget process. It also represents an insurance against the State's unwillingness to fund UW System requests. It is understandable why a large reserve angered state Legislators. The freeze forced the drawdown of reserves and effectively moved control of spending from the Regents to the Legislature. It has served its purpose. The UW System continues to be a high rate of return on investment for the state. It is also a high return on investment for students. Extending the freeze further on will only hurt the UW System and the state. It results in the under-provision of educational quality at a time when the return to skills is at an historic high.

There is little evidence that the tuition freeze has improved access. If improving access is the objective, there are other more effective and targeted ways of accomplishing it. <u>There is consequently neither an equity nor an efficiency-based justification for extending the tuition freeze</u>. Once tuition is allowed to adjust, part of the increased tuition revenues will typically be allocated for financial aid. We are at the crossroads where the state of Wisconsin needs to decide what the long-term funding model for the UW System ought to be. Our peers are investing substantial sums in their universities. In an era where the return to college and becoming skilled is at its highest level in over one hundred years, the various stakeholders will need to do more to ensure that the UW-System can better serve Wisconsin residents. All campuses in the UW-System have and need to continue to do more, the State needs to be more supportive by awarding the UW-System greater autonomy, and additional resources, especially in high growth areas that significantly impact Wisconsin; and in-state students *need* to pay modest increases in tuition so that they can continue to enjoy a high-quality education in Wisconsin.