The Economics of UW-Madison White Paper #6

UW-Madison Unbound*

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Executive Summary

- In our first five papers on the economics of UW-Madison, we have shown:
  - There is a significant benefit to graduating from UW-Madison, and this benefit varies considerably across majors.
  - UW-Madison has been falling in graduate, research, and international rankings. This is not due to lack of state support since there is little evidence to suggest that the Wisconsin taxpayer is stingy.
  - State appropriations to UW-Madison, as a fraction of its overall budget, are slightly lower than its peers. UW-Madison is not as effective as it can be in magnifying the impact of state appropriations.
- This report explores the internal and external constraints faced by UW-Madison and the reasons these constraints exist.
- **Internal constraints:** UW-Madison has an archaic budget model that does not reward economic activity or innovation. The more efficient add-on, activities-based model affects only a small fraction of the overall enterprise.
- **External constraints:** UW-Madison faces significant price and capital controls.
  - Following *Reservegate*, in-state tuition has been below peer institutions.
  - UW-Madison is the only major university that does not issue its own debt for construction projects. It also lacks project management flexibility enjoyed by peer institutions.
- We identify governance both within the institution and across institutions as one explanation for the persistent inefficiency.
  - UW-Madison has strong form of governance which makes change difficult.
  - UW-Madison shares a governing board with 12 other distinctly different universities. This leads to a potential conflict between the actions of the board and the best interests of UW-Madison.
- Relaxing these constraints would unshackle UW-Madison and help it realize its full potential.

This is the sixth, and final, paper in our series on the economics of UW-Madison. In previous papers, we show there is a significant return to a bachelor's degree from UW-Madison, with an expected return that varies substantially across majors. We show that UW-Madison's graduate, research, and global rankings have declined over the past few decades. We provide evidence that administrative spending per full-time equivalent (FTE) undergraduate at UW-Madison is near the median of its peers, while the ratio of non-instructional to instructional staff at UW-Madison is higher than the median of its peers. We show that the Wisconsin taxpayer is not stingy in funding either higher education, in general, or UW-Madison, in particular. In fact, state appropriations per FTE undergraduate are higher for UW-Madison than the median of its peers, and, as a share of university revenue, state appropriations for UW-Madison are similar to the median of its peers.

UW-Madison is doing well: It is providing a valuable product to its students and value to its community. How can it do even better? This paper delves into some internal and external constraints faced by UW-Madison. UW-Madison's budget model is archaic and does not reflect workforce needs and student demand. Its in-state tuition is lower than most of its peers and it is the only major institution without either bonding authority or project management flexibilities. Why is this? One issue is that UW-Madison has a strong form of governance that makes change difficult. It also shares a governing board with 12 other distinctly different universities, causing a potential conflict between UW-Madison and its governing board. Relaxing these constraints could help UW-Madison realize its full potential.

1 The budget model at UW-Madison

It is appropriate to start with a critical look internally. What more can UW-Madison do to better serve the state of Wisconsin? A well-functioning enterprise should have a clear and transparent budget model. Budgets need to reflect priorities. Budgets should incentivize UW-Madison to be responsive to workforce needs and student demand. This would help drive growth in the state's economy and increase utility for students and their families. Such market responsiveness is sometimes derided as vocational by advocates of traditional liberal arts education. But even if one believes that the social value of liberal arts majors is not always reflected in market outcomes, there is still good reason to pursue a sensible budget framework. By doing so, UW-Madison would generate more revenues by allocating resources to programs with higher economic feasibility. This margin could be reinvested in improving the quality of education, access and affordability for residents, and to help subsidize those activities that are necessary and important, but not currently economically viable.

While budgets for each college at UW-Madison are adjusted somewhat each year, decisions reached long ago have an outsized impact on current allocations of general purpose revenue (GPR) and tuition revenues across colleges. A sensible budget model would discourage departments from reducing teaching in high demand areas or offering unnecessary courses, while simultaneously encouraging them to grow their student numbers, encourage timely graduation, and increase growth in their research portfolios. It would carefully balance incentives against ability to drive strategy, correct for market failures, and provide for the common good through infrastructure and needed investments.

The modern economy and the increasingly competitive higher education landscape require UW-Madison to move nimbly and rationally at the margin. The allocation of resources across different colleges at UW-Madison is very uneven and, to a first approximation, was set many decades ago. They have been fine-tuned somewhat, but no major changes have been made. While student demand need not be perfectly aligned with budgets, UW-Madison needs to move away from a legacy budgeting model in which budgets are uncorrelated with activity. Such a model does not serve anyone well and results in inefficiencies. The allocation of GPR and tuition revenues across colleges should be based on, and move slowly with, student demand — credit hours and degrees granted. The new budget model should make allocation of resources across colleges transparent, redirect resources as objective measures of activity change, and generate aggregate resources through reallocation that can be used by campus leadership for investment in new strategic initiatives.

There have been attempts to alter UW-Madison's archaic budget model. Chancellor Blank asked a group from across the university to articulate the need for change many years ago. The Budget Model Review Committee (2014) unanimously made the case for change based on what peer institutions do. The committee noted that "In conversations with faculty, staff, students and campus leaders, the committee heard considerable agreement our current budget allocation model is no longer meeting our needs, and that the time for change is now." The committee's report concluded that the current incremental budget model does not meet UW-Madison's current or projected needs. The current budget model does not align resources to activity, and therefore responding to shifts in educational demand is difficult. It allocates core funds based on history, not productivity or centrality to mission. It lacks transparency and does not objectively allocate core funds based on program quality.

A follow-up committee was created to implement this change. Several recommendations were made by the Budget Model Development Committee (2014), including the notion that instructional resources be allocated to schools and colleges based on each unit's proportion of total credit hours provided or each unit's proportion of total enrollment. These changes did not come to fruition. Any change creates winners and losers, and, hence, some opposition is inevitable.

There have been some positive developments at UW-Madison in the move towards a more sensible budget model. New programs are subject to such a model. Increases in enrollments by schools and colleges are now rewarded with additional resources, and targeted investments in areas of high demand, such as computer science, are being made.

The UW System also operates on a legacy budget model. For several decades, the formula used to allocate resources across system campuses has been relatively unchanged. Recently, this has received attention, and the UW-System seems poised to change the formula to reallocate resources away from Madison to other campuses (Wisconsin State Legislature, 2021). Historical evidence suggests that flexibility and activity-based budgeting are complements — greater decentralization is associated with a move towards an activity-based budget model.

2 In-state tuition

UW-Madison operates under severe price controls that are not faced by its peers. In 2013, the state legislature discovered that the UW System held $1 billion in reserves while simultaneously requesting tuition increases.[1] The reserves represented a substantial sum relative to the UW System's budget. The UW System did not have an immediate and clear response at the Joint Finance Committee meeting on the intended use of the reserves. While the UW System later took the view that the reserves were mostly earmarked for planned future expenses and were in line with peer institutions, members of the state legislature felt that the System was not forthcoming. To the legislature, the reserves were the result of rapid tuition increases that were not needed for current operations.[2] This resulted in a breakdown in trust, and the UW System received a substantial budget cut and an almost decade-long tuition freeze for in-state undergraduates. While the tuition freeze was lifted in 2021, there was a reluctance to increase tuition, even in the face of significant inflationary pressures. The regents did not raise tuition for 2021–22 and 2022–23, but eventually increased tuition in 2023–24 and 2024–25.

Figure 1 shows that, in 2012, UW-Madison's in-state tuition was in the middle of its peers. In 2012–22, when in-state tuition was frozen, UW-Madison's tuition fell to the second-lowest among its peers. Even with the recent increases (to $9,644 in 2023–24 and $10,006 in 2024–25), UW-Madison's in-state tuition remains lower than most of its peers.

On average, in-state tuition for the 10 peers in figure 1 increased by 27.5% between 2012 and 2022. At this rate, UW-Madison's in-state tuition in 2022 would have been $2,550 more than it was under the tuition freeze. With 17,703 Wisconsin and 3,114 Minnesota

[1] Unrestricted reserves, which are funds available for general expenditures, were $648 million.

[2] Tuition increased at an annual rate of 5.5% in 2007–08 and 2012–13.

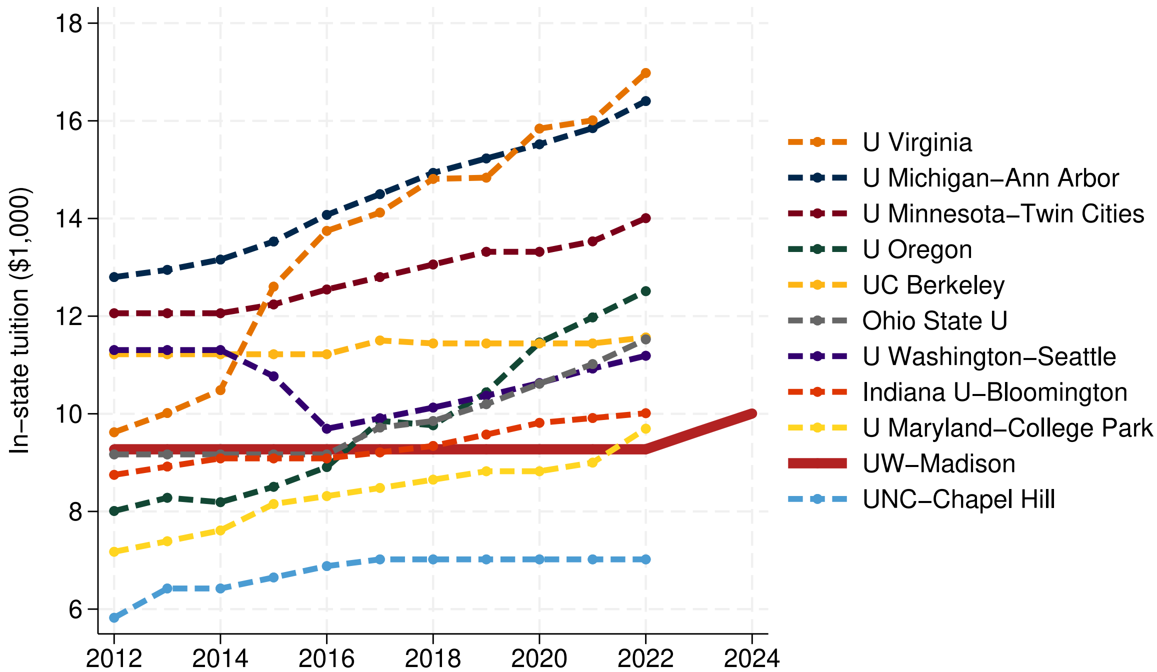

Figure 1: Tuition for in-state undergraduates

The labels on the right are ordered according to each university's tuition in 2022 (for the 2022–23 academic year). *Data source:* IPEDS for 2012–22 and UW-Madison's website for 2023–24.

residents enrolled in UW-Madison in the fall of 2022, tuition revenue would have been $53.1 million more than it was under the tuition freeze.

Figure 2 shows that, soon after the in-state tuition freeze, UW-Madison raised its tuition for out-of-state students. Between 2014 and 2022, UW-Madison's out-of-state tuition increased by 48.5%, higher than the average increase of 32.2% among the 10 peers in the figure. With the larger increase, out-of-state tuition at UW-Madison is now roughly at the median of its peers. The increase in out-of-state tuition allowed UW-Madison to make up some lost revenue from the tuition freeze. The higher out-of-state tuition, however, implies that UW-Madison has less room to increase it further.

The revenue lost from the tuition freeze was not compensated by additional state appropriations. Both before and after the tuition freeze, state appropriations per FTE undergraduate received by UW-Madison were comparable to its peers.[3] State appropriations and tuition revenues are largely substitutes, and what matters for a public university is the sum of these two sources. In many years, the Board of Regents of the UW System increased tuition at UW-Madison by precisely the amount needed to compensate for the decline in state appropriations. Sadly, that "implicit contract" with the state no longer exists.

[3] Even so, as we discuss in paper #5 of this series, there is little evidence to support the narrative that the Wisconsin taxpayer is ungenerous.

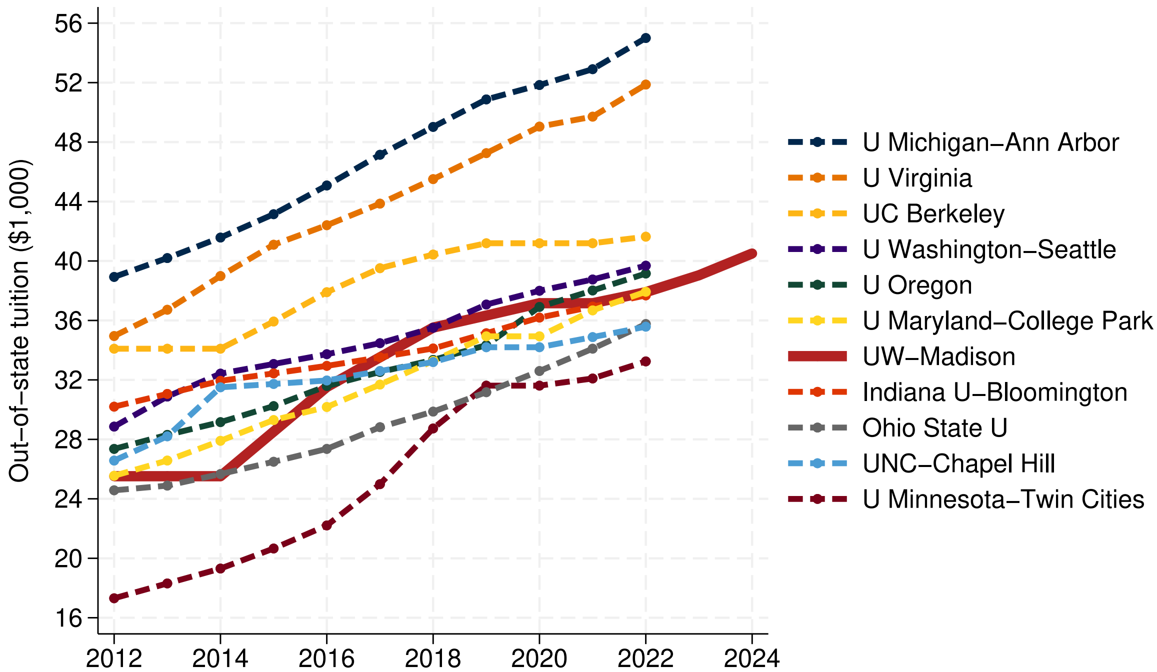

Figure 2: Tuition for out-of-state undergraduates

The labels on the right are ordered according to each university's tuition in 2022 (for the 2022–23 academic year). *Data source:* IPEDS for 2012–22 and UW-Madison's website for 2023–24.

With the tuition freeze and the increase in out-of-state tuition, the majority of state appropriations to UW-Madison could be viewed as subsidies by the state directly to residents attending UW-Madison, with almost no state subsidy to UW-Madison, the institution. To see this, imagine in-state residents pay the higher out-of-state tuition.[4] The difference between in-state and out-of-state tuition in 2022–23 was $28,631. In 2022, 4,622 Wisconsin and Minnesota residents enrolled as freshmen at UW-Madison.[5] Since it takes 3.89 years, on average, to graduate, in-state students would need ($\$28,631 \times 4,622 \times 3.89 =$) $514 mil. to provide them with the lower in-state tuition.[6] In 2022–23, the state contributed $551 mil. to UW-Madison. Almost the entire contribution is a subsidy to in-state students. This subsidy is tantamount to a voucher, given by the state to its residents, that entitles state residents attending UW-Madison to pay the lower in-state tuition rate.

While the contribution by the state of Wisconsin to UW-Madison is just sufficient to offset the differential cost in-state, this is an important contribution that helps state residents send their children to a great university. It is important to remember, however, that state residents who attend UW-Madison receive a large private benefit in the form of signifi-

[4] It is a reasonable to assume that UW-Madison could find enough students to fill these slots.

[5] Minnesota-resident tuition at UW-Madison is slightly higher than Wisconsin-resident tuition.

[6] This simple calculation ignores several details, such as effective prices (tuition less financial assistance), payments made by graduate students, and summer tuition revenue. It underestimates the subsidy to in-state students since out-of-state tuition is below market price.

cantly higher lifetime earnings.

The bottom line is that, when we focus on total resources available to the institution, UW-Madison is significantly below the median of its peers. Figure 3 shows that, for UW-Madison, state appropriations plus tuition and fees per FTE undergraduate was $37,712 in 2022. In comparison, the median across peer institutions was $42,475. The difference, 12.6%, is largely due to the lower in-state tuition at UW-Madison.

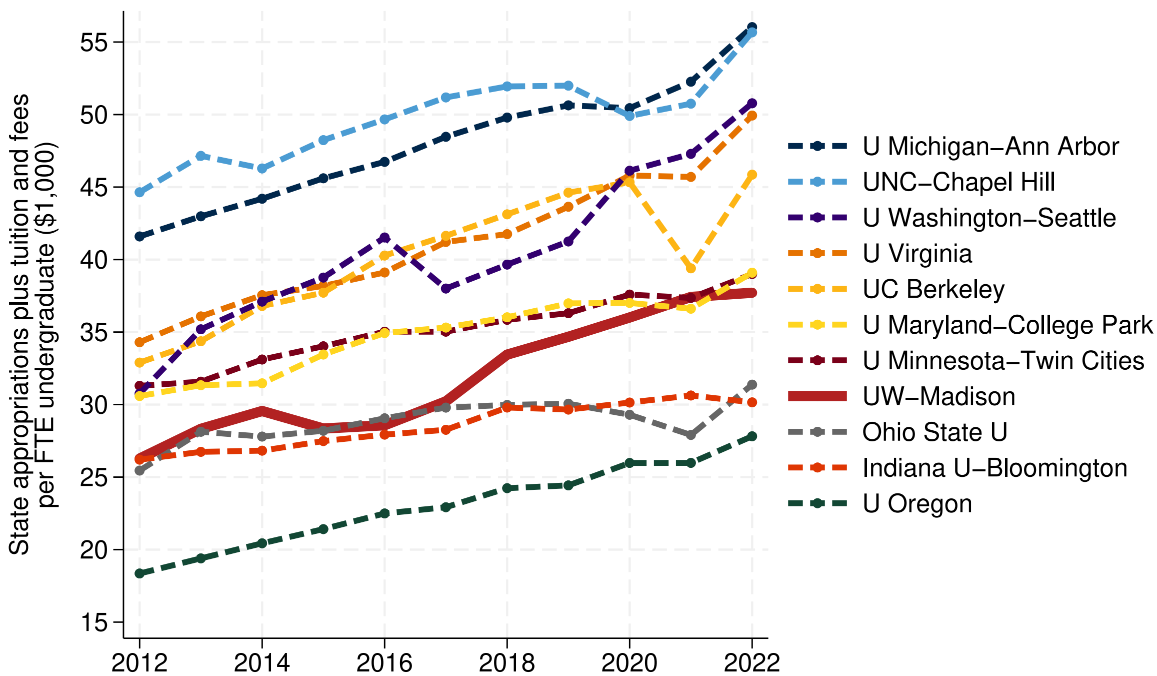

Figure 3: State appropriations plus tuition and fees per full-time equivalent undergraduate

The labels on the right are ordered according to each university's value in 2022 (for the 2021–22 academic year). *Data source:* IPEDS.

3 Bonding authority and flexibility

UW-Madison is the only major public university that cannot issue debt for construction projects. It is also one of the most restricted in terms of how it is allowed to deliver those projects, holding to a management process that primarily uses outdated project delivery methods used by the state's Department of Administration (DOA). Compounding the problem, DOA is generally under-resourced for project management, which leads to delays, cost increases, and a host of related problems with delivering the buildings and facilities needed to run a world-leading university. This is a problem for all concerned.

Bonding authority

The state issues and backs all debt for its capital budget, including UW-Madison and the UW System — roughly half of state construction. This means that borrowing to finance other capital needs for the state (e.g., transportation) is constrained to half the level that it would otherwise be able to achieve. Wisconsin has held general obligation debt relatively flat at $7–8 bil. in recent years (Table III-3, Wisconsin Department of Administration, 2023). If the state wants to remain at that level, new borrowing is limited by the principal repayment each year, roughly $500–700 million every two-year budget cycle (Table III-9, Wisconsin Department of Administration, 2023). Given capital needs in the state, the amount available for UW-Madison and the broader UW System are limited. The lack of access to capital markets by UW-Madison means that total construction activity in the state is reduced relative to potential. For UW-Madison, this likely means that $700 mil. in projects will not be undertaken in the next biennium. For the UW System as a whole, the corresponding value is likely $1.2 bil.[7]

Borrowing by the state for infrastructure projects is different than borrowing to finance buildings for UW-Madison and the System in one important respect. Borrowing for infrastructure projects in the state is paid for with future tax revenues — either increasing taxes or reallocating some government expenditure to loan repayment. In contrast, borrowing by UW-Madison could be paid for with future program revenue. Creating new, self-sufficient programs requires facilities. Allowing UW-Madison to borrow against future revenues from new initiatives would substantially impact economic activity in the state.

The state's reluctance to grow total debt extends to both general-fund-supported borrowing and *program revenue-supported bonding*, in which the university pays the costs. The reluctance to issue revenue bonds is largely due to the state issuing those bonds as general obligation bonds that are backed by the full faith and credit of the state. Other states allow the revenues of the university to serve as the ultimate backstop of university debt. This approach allows the state to direct its limited borrowing to those projects that require future tax revenues, rather than supporting projects that can cover their own costs. As a consequence, the university's ability to respond to opportunities is constrained.

Allowing UW-Madison and the UW System to issue their own debt makes economic sense. UW-Madison has a strong balance sheet and would earn a top credit rating if allowed to do so. Total debt capacity for the state and the university at any particular credit rating would likely be higher with both parties issuing their own debt in credit markets. This is a primary reason why every other state in the nation pursues this strategy with its flagship public university.

An example will help illustrate this point. A new UW-Madison chemistry building or Engineering building — which increases the throughput of much-needed STEM majors — could have been built years ago if UW-Madison had access to capital markets and project

[7] These numbers are based on past UW System requests as well as bonding authority sought by other state universities.

management capability. The inability to construct this building in a timely manner meant that UW-Madison was unable to expand its STEM majors, despite the high demand from students and authority from the Regents to expand the number of out-of-state students. This lead to lower revenues and constrained growth for UW-Madison, the UW System, and Wisconsin's modernizing economy.

Other universities have borrowed significant sums. In 2011, the Ohio State University issued 100-year bonds to raise $500 mil. for construction projects. State universities across the nation borrow to finance large capital and infrastructure projects at varied duration. Borrowing rates depend on credit scores, and borrowing comes with the usual risks associated with the ability to pay back the loan, especially during economic downturns.

Universities will need to designate the revenue source used as collateral when borrowing: GPR, tuition, or specific program revenue, and the collateral type will affect borrowing costs. Sometimes, revenue from a new activity used to back bonds may not materialize as planned. In that case, the risk gets shifted onto other sources of revenue. For example, UC Berkeley issued $445 mil. in bonds in 2009–13 to rebuild its football stadium. Due to overoptimistic revenue projections, interest payments had to be covered by other traditional sources of revenue at Berkeley.[8] For a large university with a diversified and dependable revenue base, the risks are lower. No major university has defaulted on a bond issuance in recent memory. University credit ratings, like those of state governments, are generally very high.

Figure 4 shows that, in the last decade, the growth in depreciable capital assets was significantly lower for UW-Madison relative to peers. In fact, UW-Madison — the only major research university without bonding authority — was the only university to experience a significant decline in the value of its capital assets.

Why does capital investment matter? For one, it is critical to attracting the best talent to UW-Madison. Investments in capital are essential to maintaining and enhancing the research enterprise. Large federal grants require significant capital outlays. It is perhaps unsurprising that the decline in physical capital and human capital investments over the last decade accelerated UW-Madison's decline in rankings, as documented in a previous paper in this white-paper series.

Project management

The project management problem is no less a problem, and the current project management regime is a material drag on efficiency. It currently takes UW-Madison, working through the state DOA, 6–8 years to build a new building, while peer institutions do it

[8]This should not be a problem at UW-Madison, given how much Wisconsinites love the Badgers.

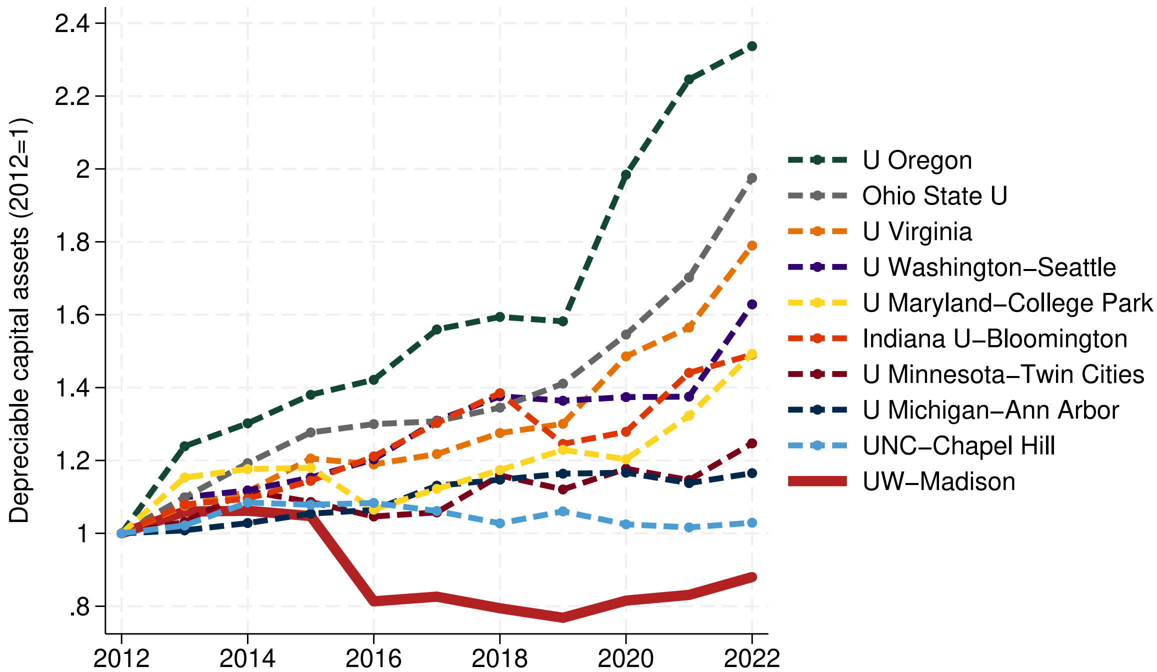

Figure 4: Growth in depreciable capital assets

The value in 2012 is normalized to 1. The labels on the right are ordered according to each university's value in 2022. UC Berkeley is not included due to missing data. *Data source:* IPEDS.

in 2–3 years. This depresses construction activity and constrains the strategic flexibility the university needs to respond to emerging demands from students, employers, and the research enterprise. Worse,when buildings are eventually delivered, costs wind up being much higher due to cost escalation and expensive change orders arising from poor coordination. Access to capital markets without changes to project management will not provide the flexibility our modern economy requires, so these two reforms must be jointly pursued.

Regulation

UW-Madison faces significantly greater regulation and constraints than competing universities. UW-Madison is the only major public research university that does not have a credit rating, and the only significant public university that is not the backer of its own debt. All 10 peer schools mentioned above issue their own debt. Table 1, in the appendix, contains their recent credit ratings and links to Moody's reports.

State regulations and university bylaws on debt management provide additional details about peer universities' bonding authorities. As noted in table 2, in the appendix, there is a high degree of commonality in how other states deal with debt issues, with their universities' governing boards approving debt issuance in keeping with a board-managed debt policy.

Compared with its peers, UW-Madison is subject to a higher level of regulation for construction management. It is the only university in the Big 10 that does not manage its own construction projects directly and relies on the state to do so. As detailed in table 3, in the appendix, we find that many peer universities participate, to differing extents, in their state's capital budgeting process.

Freeing up UW-Madison can benefit the rest of the UW System and Wisconsin taxpayers. UW-Madison has the resources and scale to create more value for the state if it is allowed to be more market-oriented.

4 The governing board

Changing the governance of UW-Madison to a board whose charge is only UW-Madison could help the University address its constraints, realize its full potential, and better serve the state of Wisconsin.

Growth in post-secondary education after World War II often lead to distinct university systems within a state. Seeking economies of scale in governance and a single legislative contact, many states consolidated their universities into systems with a single governing board. As university systems became more complex and diverse, the single governing board created problems. Discussing our own system, Robert Berdahl, Steven Sample, and Raquel Rall write:

> "In Wisconsin, the legislature, tired of competition between the four-campus University of Wisconsin System and the Wisconsin State College System, in 1973 combined all four-year institutions into the University of Wisconsin System, governed by a single board of regents.
>
> The merger in Wisconsin succeeded in moving the conflict from the legislature to the system itself, with the regional campuses often in opposition to the flagship, Madison, and the urban campus in Milwaukee. During the next decade, faculty salaries at Madison fell to last place in the Big Ten; efforts to overcome the gap were attacked by the regional campuses. Between 1980 and 1986, class size in Madison and Milwaukee increased 17 percent — 70 percent more than in the regional campuses. Subsequent efforts to improve the funding of Madison were largely successful, but Wisconsin represented a clear case in which the flagship research university suffered as a consequence of the creation of a single consolidated system." (Berdahl et al., 2014)

UW-Madison shares the same governing board, the Board of Regents of the UW System, with 12 other Universities of Wisconsin. In 2022, UW-Madison accounted for 27.5% of FTE undergraduates in the UW System. Figure 5 shows that, among the 10 peers in this study, UNC-Chapel Hill is the only flagship university that shares a governing board with more institutions (17) than UW-Madison (12); and UNC-Chapel Hill and UC Berkeley are the only two flagship universities whose shares of system-wide FTE undergraduates are smaller than that of UW-Madison.[9]

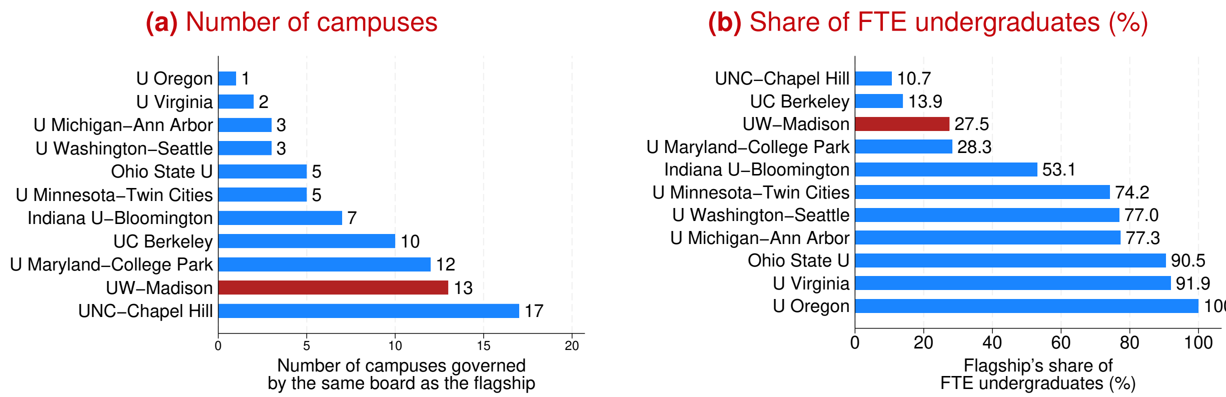

Figure 5: Flagships' weights in their governing boards

Notes: Using data from IPEDS, the right panel calculates the ratio of each flagship's full-time equivalent (FTE) undergraduates to the total number of FTE undergraduates in all post-secondary institutions governed by the same board as the flagship.

UW-Madison is significantly different from the other universities within the UW System, and this difference is larger than the differences between UW-Madison's peer institutions and their systems. For example, in 2022, 56.8% of first-time degree/certificate seeking freshmen in UW-Madison were from out of state. The corresponding number for all institutions in the UW System is 32.7%. The difference, 24.1%, as shown in the left panel of figure 6, is larger than all 10 of UW-Madison's peers. Similarly, 36.5% of UW-Madison's total expenditures are devoted to research. The corresponding number for the UW System is 23.6%. The difference, 12.9%, shown in the right panel of figure 6, is larger than all 10 peers of UW-Madison mentioned above.

Since UW-Madison is significantly different from the rest of the UW System, policies that are best for UW-Madison may not be the top priority of the Board of Regents and the administration of the UW System. This potential conflict of interest is more severe for UW-

[9] Table 4 in the appendix lists the governing board for each institution shown in figure 5. UNC-Chapel Hill is a constituent institution of the University of North Carolina (UNC) system, which has a board of governors with 24 voting members elected by the Senate and House of Representatives of the North Carolina General Assembly. However, different from UW-Madison, UNC-Chapel Hill has its own board of trustees composed of fifteen persons: eight are elected by the UNC Board of Governors, six are appointed by the NC General Assembly, and the remaining member is the president of the student government, ex officio. The board of trustees serves as an advisor to the Board of Governors on matters pertaining to its institution and as an advisor to the Chancellor concerning the management and development of the institution. Consequently, the results on UNC-Chapel Hill, which has two Boards, must be viewed with some caution.

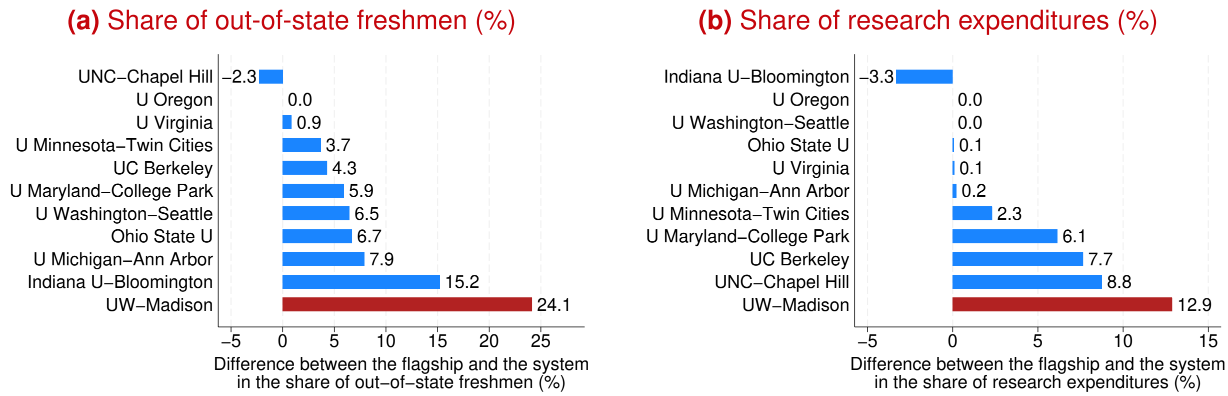

Figure 6: The flagship vs. all post-secondary institutions governed by the same board

Notes: Using data from IPEDS, the left panel calculates the difference between each flagship and all post-secondary institutions governed by the same board as the flagship in the percentage of first-time degree/certificate seeking freshmen who are from out of the state, the right panel calculates the difference in the share of expenditures devoted to research.

Madison than its peers. For example, the University of Michigan has only 3 campuses, with Ann Arbor being the dominant one, headed by the president of the university rather than a chancellor, and an independent Board of Regents elected at large in biennial statewide elections. The University of Minnesota has 5 campuses, with the flagship Twin Cities campus headed by the president of the university rather than a chancellor.

Consistent with the view that sharing a governing board with more and significantly different institutions could lead to a conflict of interest between the flagship and the governing board, figure 7 shows that, among UW-Madison and its 10 peers, sharing a governing board with more institutions is negatively related to both in-state tuition (in 2022, the left panel) and growth in depreciable capital assets between 2012 and 2022 (the right panel).

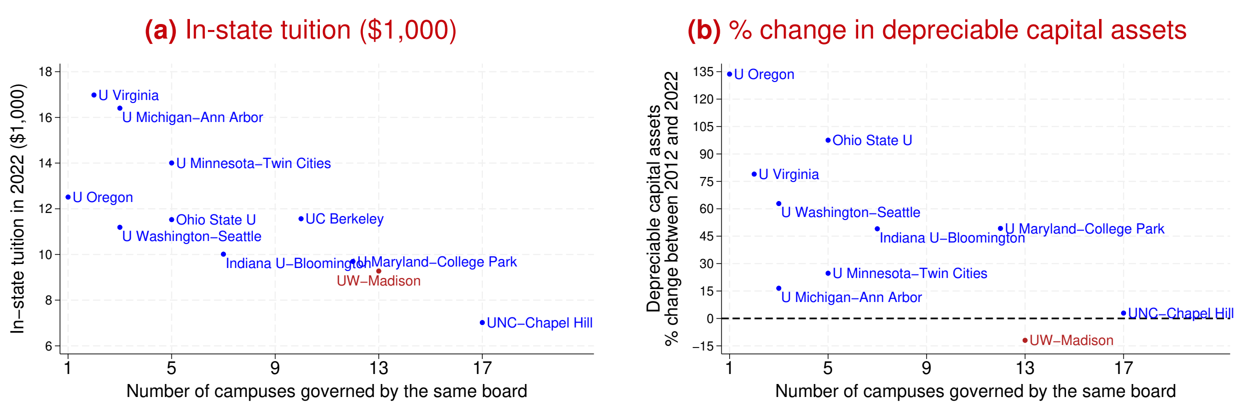

Figure 7: Number of campuses governed by the same board, in-state tuition, and capital assets

Data source: IPEDS. UC Berkely is not plotted in the right panel due to missing data.

The patterns evident in figure 7 suggest more-focused boards may be better for flagship campuses. In contrast to system boards, institutional boards tend to be more familiar with the one campus they govern, making them more effective evaluators of campus leadership and the pressures and challenges under which they operate. As advocates of the university, they can be more involved in raising money from private sources. Institutional change could take the form of designating UW-Madison as a public authority or creating an institutional board for UW-Madison that reports to the Board of Regents (UNC-Chapel Hill has such an arrangement).

For the better part of the last 50 years, the great flagship public research universities of the United States succeeded despite many constraints. Public research universities have been an essential component in the success of American higher education and helping students achieve the American Dream. During the past two decades, however, they have faced unprecedented challenges — growing enrollments, declining state funds, and faculty salaries lagging far behind peers, which often include private universities. Given the economic value they generate, the future success of public research universities is essential to the well-being of the nation and the state. It is well past time to ask whether UW-Madison's excellence can be maintained if it remains attached to a system of governance created in a different era, within a different environment, for a different purpose.

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5 Appendix

Table 1: Moody's credit ratings: selected peers of UW-Maidson

Institution	Rating	Link
U of California System	Aa2	https://www.moodys.com/credit-ratings/University-of-California-CA-credit-rating-800040010
Indiana U	Aaa	https://www.moodys.com/credit-ratings/Indiana-University-IN-credit-rating-600024466
U System of Maryland	Aa1	https://www.moodys.com/credit-ratings/University-System-of-Maryland-MD-credit-rating-800040057
U of Michigan	Aaa	https://www.moodys.com/credit-ratings/University-of-Michigan-MI-credit-rating-600028063
U of Minnesota	Aa1	https://www.moodys.com/credit-ratings/University-of-Minnesota-MN-credit-rating-600039969
UNC at Chapel Hill	Aaa	https://www.moodys.com/credit-ratings/University-of-North-Carolina-at-Chapel-Hill-credit-rating-600029641
Ohio State U	Aa1	https://www.moodys.com/credit-ratings/Ohio-State-University-OH-credit-rating-600025915
U of Oregon	Aa2	https://www.moodys.com/credit-ratings/University-of-Oregon-OR-credit-rating-902190032
U of Virginia	Aaa	https://www.moodys.com/credit-ratings/University-of-Virginia-credit-rating-600028443
U of Washington	Aaa	https://www.moodys.com/credit-ratings/University-of-Washington-WA-credit-rating-600026667

Table 2: Bonding authority: selected peers of UW-Madison

Institution	Authority	Notes
U of California System	Yes	UC has authority to issue bonds. The Board of Regents approves bond issuances. The Office of the CFO coordinates financings for the University.
Indiana U	Yes	IU has authority to issue bonds. Bonds not backed by state. Financed through IU building Corporation for non-state funded projects. Can pledge against general student revenues.
U System of Maryland	Yes	USM has authority to issue bonds. The Board of Regents approves each project to be financed using the proceeds of USM Revenue Bonds through a bond resolution.
U of Michigan	Yes	The Treasurer's Office has the exclusive authority to issue debt, including bonds on behalf of the Regents of the University of Michigan.
U of Minnesota	Yes	UMN issues debt to fund various capital projects. The issuance process and post-issuance compliance is the responsibility of the University Budget and University Finance office.
U of North Carolina system	Yes	UNC utilizes a mix of funding sources including State funds (bonds and appropriations), University bonds, internal reserves, and philanthropy.
Ohio State U	Yes	OSU has authority to issue bonds. OSU issues and sells the bonds. CFO approves target bonding levels working with governing board.
University of Oregon	Yes	UO started bond issuances since 2012. The Board retains authority for the approval of the execution of instruments relating to any borrowing or debt finance transactions which are or may be more than $5 million.
U of Virginia	Yes	Tax-exempt bonds are valid debt obligations used by the University to finance construction of facilities. The Board of Visitors approves bond issuances.
U of Washington	Yes	The Board of Regents has authority to issue bonds to fund certain capital projects and to enter financing contracts to acquire real and personal property.

Table 3: Project management authority: selected peers of UW-Madison

Institution	Authority	Notes
U of California System	Yes	All significant Capital Project Matters are reserved to the Finance and Capital Strategies Committee of the Board of Regents.
Indiana U-Bloomington	Yes	IU-Bloomington oversees management and construction. State has role in approval where project is $2 million+.
U System of Maryland	Yes	In most cases, the Board of Regents shall approve all procurement contracts of $5 million or more prior to their execution.
U of Michigan	Yes	Before a capital project can officially begin, the president must support the project and the Board of Regents must approve the project. All capital projects over $500k require the Board of Regents approval.
U of Minnesota	Yes	UMN oversees management and construction. All capital projects over $1 million require the Board of Regents approval.
U of North Carolina system	Yes	UNC oversees certain capital improvement projects. Board of Governors has the authority for the administration of design, construction, or renovation of buildings, utilities, and other property developments requiring the estimated expenditure of public money of $2 million or less.
Ohio State U	Yes	OSU manages and approves projects. Construction projects $4 million + go to the Board.
U of Oregon	Yes	The Board retains authority for the approval of a capital project budget that is anticipated to exceed $5 million.
U of Virginia	Yes	UVA manages and oversees all capital projects. The Buildings and Grounds Committee of the Board of Visitors shall approve all projects more than $5 million.
Uof Washington	Yes	UW manages construction and oversees all capital projects. The Board of Regents shall approve all projects more than $15 million. When the cost is between $5 million and $15 million, the President or the President's designee may approve the projects.

Table 4: Governing board for selected universities

Institution	Governing board
Indiana U-Bloomington	Indiana U Board of Trustees
Ohio State U	Ohio State U Board of Trustees
UC Berkeley	UC Board of Regents
U Maryland-College Park	University System of Maryland Board of Regents
U Michigan-Ann Arbor	U Michigan Board of Regents
U Minnesota-Twin Cities	U Minnesota Board of Regents
UNC-Chapel Hill	UNC Board of Governors
U Oregon	U Oregon Board of Trustees
U Virginia	U Virginia Board of Visitors
U Washington-Seattle	U Washington Board of Regents
UW-Madison	UW System Board of Regents