MHEC
POLICY BRIEF

State Higher Education Financing Models

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In most states and in the nation as a whole, the combination of constrained resources and rapid enrollment growth during the Great Recession left a legacy of significantly diminished per-student funding for higher education. Adequate funding is a necessary component of supporting college access and success and meeting state goals for educational attainment. But the adoption of a financing model that allocates state resources equitably and efficiently is also important for improving student outcomes.

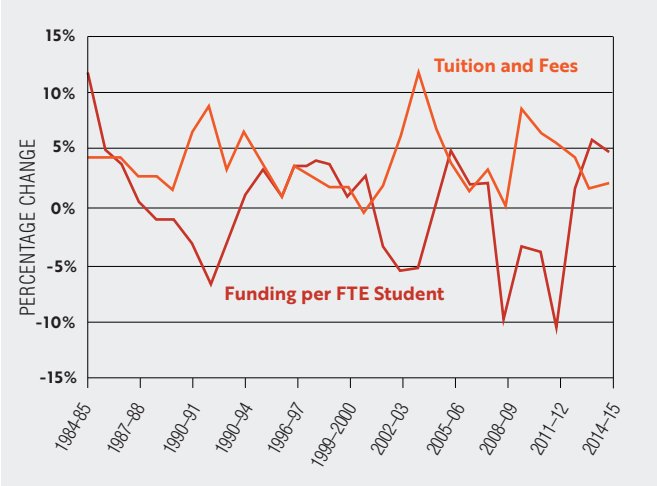
This brief addresses four areas in which state policy makers can learn from practices in other states and from principles of sound public policy design to strengthen their higher education financing systems. The year-to-year stability of funding, the balance between appropriations for institutions and student aid, the growing interest in tuition-free community colleges, and the allocation of funds across public colleges and universities are all areas in which states take a variety of approaches, with quite different implications for educational opportunity.

FLUCTUATIONS IN FUNDING FOR HIGHER EDUCATION

Most states have been unsuccessful in designing higher education financing models that yield stable funding streams. Between 1984-85 and 2014-15, the annual inflation-adjusted changes in state and local appropriations for public higher education in the nation ranged from increases of 12 percent in 1984-85 and 6 percent in 2013-14 to declines of 11 percent in 2011-12 and 10 percent in 2008-09 (see Figure 1).

Some states experienced much greater fluctuations in funding than others. For example, California cut funding by 15 percent in 2009-10 and 19 percent in 2011-12, but raised it by 10 percent in both 2010-11 and 2014-15. Eleven other states had similar double-digit increases and decreases over the same period. Other states, such as New Jersey and Maine, avoided such fluctuations. Many factors contribute to these funding patterns. Some states have had more stable revenue flows than others; some have had less pressure from their Medicaid, correctional, and K-12 education systems; and some may place a higher priority than others on maintaining postsecondary funding.

FIGURE 1. Annual Percentage Change in Inflation-Adjusted Per-Student State and Local Funding for Higher Education and In-State Tuition and Fees at Public Institutions, 1984–85 to 2014–15



Source: Ma, J., Baum, S., Pender, M., & Welch, M. (2016). *Trends in College Pricing 2016: Figure 14A.*

Table 1 shows that in the Midwest annual real changes in total higher education funding between 2000-01 and 2013-14 ranged from a decline of 7 percent to increases of 3 percent in Kansas and from a decline of 6 percent to increases of 3 percent in Nebraska. But in Michigan, changes ranged from declines of 19 percent in 2010-11 and 10 percent in 2002-03 to a 6 percent increase in 2014-15. In Minnesota, funding rose by 8 percent in 2006-07, fell by 13 percent in 2009-10 and by another 10 percent in 2010-11, and rose again by 7 percent in 2012-13 (Illinois State University, 2000 to 2014).

TABLE 1. Largest Annual Percentage Changes in Total Higher Education Funding Between 2000–01 and 2013–14 in the Midwest

	Largest Increase	Second Largest Increase	Second Largest Decline	Largest Decline
Illinois	20% (2014-15)	13% (2013-14)	-6% (2010-11)	-7% (2002-03)
Indiana	8% (2013-14)	3% (2008-09)	-4% (2010-11)	-4% (2011-12)
Iowa	6% (2008-09)	5% (2007-08, 2012-13)	-9% (2001-02, 2009-10)	-14%(2010-11)
Kansas	3% (2014-15)	3% (2001-02)	-6% (2009-10)	-7% (2002-03)
Michigan	6% (2014-15)	2% (2012-13 2013-14)	-10% (2003-04)	-19% (2011-12)
Minnesota	8% (2007-08)	7% (2013-14)	-10% (2010-11)	-13% (2010-11)
Missouri	8% (2008-09)	7% (2014-15)	-10% (2010-11)	-12% (2002-03)
Nebraska	3% (2014-15)	3% (2001-02, 2005-06, 2006-07, 2007-08, 2008-09)	-2% (2004-05)	-6% (2003-04)
North Dakota	22% (2009-10)	17% (2013-14)	-3% (2004-05, 2006-07)	-3% (2003-04)
Ohio	8% (2008-09)	1% (2013-14, 2014-15)	-10% (2009-10)	-14% (2011-12)
South Dakota	7% (2012-13)	6% (2007-08)	-3% (2010-11)	-11% (2011-12)
Wisconsin	6% (2014-15)	5% (2010-11)	-10% (2003-04)	-19% (2011-12)

Source: Urban Institute. (2016). *Financing Public Higher Education.*

Significant changes in total state funding are behind the most extreme fluctuations in funding per student, but enrollment changes are also a contributing factor. Nationally, state funding for higher education decreased by 3 percent between fall 2004 and fall 2014, while full-time equivalent (FTE) public enrollment increased by 13 percent. In the Midwest, the change in FTE enrollment in public institutions over this decade ranged from a decline of 4 percent in Illinois and an increase of 2 percent in Minnesota to increases of 17 percent in Indiana and 20 percent in Missouri (Ma, Baum, Pender, & Welch, 2016, Figure 21A).

As Figure 1 shows, changes in tuition and fees generally mirror fluctuations in funding per student. If policymakers want to avoid sharp ups and downs in the rate of growth of tuition and fees, they should adopt strategies for smoothing the revenue flow to institutions. This could involve allowing "rainy day funds" at either the state or institutional level. It is very difficult for institutions to plan their educational offerings when they are uncertain about future funding levels and for families to plan their budgets when tuition changes are so difficult to predict.

FUNDING INSTITUTIONS AND FUNDING STUDENTS

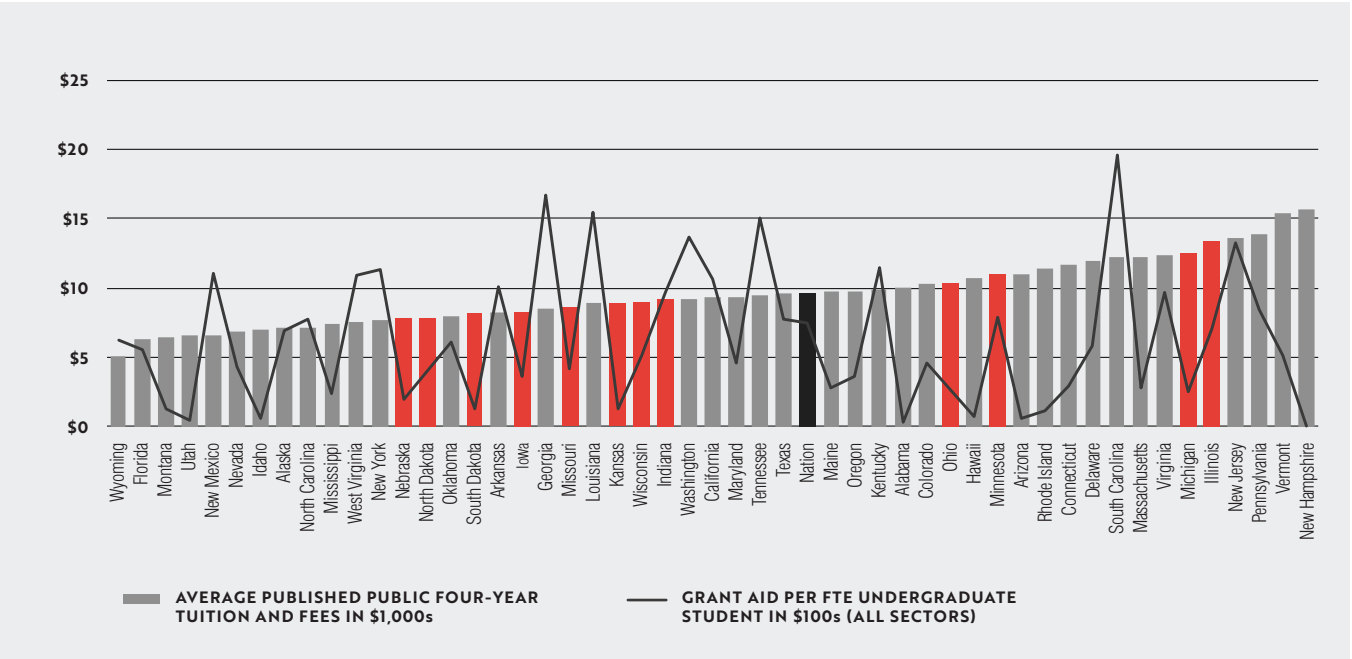
In state budgets there is a trade-off between dollars going to institutions and dollars going straight to students. In almost all states, most appropriations go to fund public colleges and universities directly. In the nation as a whole, as Table 2 indicates, the portion of state funding devoted to grant aid for students has increased over time from 7 percent in 1993-94 to 13 percent in 2013-14 (National Association of State Student Grant and Aid Programs, 2014).

TABLE 2. Grants Expenditures as a Percentage of State Fiscal Support, 1993–94 to 2013–14, Selected Years

Academic Year	Grant Expenditures as a Percentage of State Fiscal Support
1993-94	7%
1998-99	7%
2003-04	10%
2008-09	11%
2013-14	13%

Source: National Association of State Student Grant and Aid Programs. *Annual Survey Reports on State-Sponsored Financial Aid,* 1993–1994, Table 23; 1998–1999, Table 16; 2003–2004, Table 14; 2008–2009, Table 14; 2013–2014, Table 14.

FIGURE 2. Variation by State:
Tuition and Fees and State Grant Aid Per Student, 2015–16



Source: Ma, J., Baum, S., Pender, M., & Welch, M. (2016). Trends in College Pricing 2016: Table 5.
National Association of State Student Grant and Aid Programs. (2015). *Annual Survey Reports on State-Sponsored Financial Aid.*

On the one hand, appropriations to institutions subsidize all students. These dollars allow institutions to charge lower tuition, and the failure of this funding to keep up with growing enrollments over time has contributed to the rapid rise in tuition prices (Webber, 2016). On the other hand, grant aid can be targeted to the students with the most limited financial resources, mitigating the impact of tuition increases on college access. Tuition is the most visible signal of the challenges students and families face in paying for college, but inadequate funding of need-based financial aid can actually have more impact on affordability than only providing across-the-board subsidies to institutions.

This trade-off would suggest that states would either choose high aid and high tuition—as a result of lower institutional appropriations—or low aid and low tuition, where funds are not diverted to individual students. However, as Figure 2 shows, there is no correlation between tuition and fee levels across states and grant aid per student. There are examples of states with all combinations of high or low tuition and high or low aid. Furthermore, some states allocate all or most of their grant aid on the basis of financial circumstances, but others focus on academic credentials or "merit-based" aid. For example, both New Jersey, where 98 percent of the state grant aid is need-based and South Carolina, where only 17 percent is need-based, have relatively high tuition and relatively high aid. New Hampshire, with no state grant program, and Michigan, where almost all aid is need-based, have high tuition and low aid—the combination least conducive to increasing access and success.

As Table 3 reports, among the Midwestern states, only Indiana, with tuition slightly lower than the national average, has grant aid significantly higher than the national average. With almost all of its grant aid need-based, this indicates a clear effort to improve educational opportunity. Minnesota, also a need-based aid state, has the second highest grant aid in the region but higher tuition levels. Nebraska, Kansas, and South Dakota have very low aid per student; and in South Dakota, financial circumstances play almost no role in the allocation of the grant dollars.

TABLE 3. Tuition and Fees and Grant Aid Per FTE Student: Midwestern States

	Percentage of State Grant Aid Based at Least in Part on Financial Circumstances	Grant Aid per FTE Student in $100s (2014–15)	Average Published Public Four-Year Tuition and Fees in $1,000s (2016–17)
Nebraska	100%	$1.90	$7.88
North Dakota	57%	$4.00	$7.88
South Dakota	5%	$1.30	$8.14
Iowa	93%	$3.70	$8.27
Missouri	54%	$4.10	$8.63
Kansas	100%	$1.20	$8.92
Wisconsin	98%	$5.20	$8.93
Indiana	98%	$9.80	$9.20
United States	76%	$7.50	$9.65
Ohio	70%	$2.70	$10.27
Minnesota	99%	$7.90	$10.95
Michigan	99%	$2.50	$12.46
Illinois	100%	$7.00	$13.28

Source: Ma, J., Baum, S., Pender, M., & Welch, M. (2016). Trends in College Pricing 2016: Table 5.
National Association of State Student Grant and Aid Programs. (2015). *Annual Survey Reports on State-Sponsored Financial Aid.*

Keeping tuition and fees at moderate levels and providing ample need-based grant aid is a reasonable goal for a policy designed to increase educational attainment. However, focusing only on reducing or eliminating tuition for all students is problematic for a variety of reasons. First, individuals who enroll in college and succeed in earning degrees reap sizeable benefits, including but not limited to higher earnings over their working lives. Because of the significant public benefits, relying on individuals to bear the full cost of their education will lead to an inefficiently low level of education. But because of the private benefits, it is both equitable and efficient to charge user fees—tuition and fees. The inequities of denying individuals the opportunity to invest in their own futures because of their current financial circumstances are significant, so it is critical to use need-based aid to provide larger public subsidies to students for whom these charges create real barriers.

Second, general institutional subsidies tend to involve transfers from less affluent to more affluent individuals. People from higher-income backgrounds are more likely than others to go to college and when they do, to go to more selective, more expensive institutions. They also tend to spend more years in college, earning bachelor's degrees with much greater frequency that those from lower-income backgrounds. Among individuals in the U.S. born between 1979 and 1983, 54 percent from the highest family income quartile earned bachelor's degrees by age 25, compared with just 9 percent of those from the lowest quartile (Bailey & Dynarski, 2011).

In other words, if each student receives the same public subsidy for each year of postsecondary education, the subsidies to those from higher-income backgrounds will be largest. Adding the reality that, as discussed below, subsidies to students in flagship public universities are generally much higher than those to students in community colleges compounds the problem. And the recipients of the larger subsidies are not just better off before college. They are also better off after college because of the high labor market payoff to college education.

As Nobel Prize-winning economist Gary Becker argued: "The average college graduate earns much more than the average individual who does not go to college. As a result, college graduates earn a lot more on average than does the typical taxpayer. It is a questionable system of regressive taxation when taxes are spent on subsidizing individuals who will earn more than those paying the taxes" (Becker, 2011). Writing in response to tuition increases in the face of state budget problems, he proposed higher grant aid for low-income students and a loan system with payments dependent on earnings. This would be better policy than holding tuition down by exacting more revenues from taxpayers whose incomes are, on average, lower than those of the college-educated. Other economists have made similar arguments (McPherson & Schapiro, 1998; Turner, 2006).

A third problem with focusing only on keeping tuition down at the expense of a strong need-based state grant program is that tuition is not actually the largest financial burden facing most low- and moderate-income students. In addition to having to buy books and supplies, students face living expenses while they are in school. Working full time or even close to full time while trying to earn an undergraduate degree leaves little time for academics, even for students who do not have family responsibilities. Enrolling part time to leave more time for the workforce does not just stretch out the time in college; it significantly reduces the probability of ever earning a degree (Shapiro et al., 2016). So even if tuition and fees were eliminated entirely, students from low-income families and those who are supporting themselves would struggle financially in college. A generous need-based grant program can make a real difference in success rates for these students.

Fourth, the evidence is strong that lower-income students are more price-sensitive than those from more affluent backgrounds. A few thousand dollars might change the choice of institution for middle- or upper-income students and reduce some of the financial stress of financing a college education. But most of these students will go to college without that extra funding. For low-income students, on the other hand, a similar amount of money is much more likely to mean the difference between enrolling and skipping college altogether or between persisting to earning a degree and dropping out (Bowen, Chingos, & McPherson, 2009; Heller, 1997).

Finally, providing high quality education is expensive, and will remain so even with successful cost-cutting strategies. If institutions are forced to maintain extremely low tuition rates, they may not have adequate revenues to support students. Charging a low price for a poor quality educational opportunity is not doing students a favor. Both logic and evidence suggest that ensuring adequate institutional resources is a prerequisite for student success (Bound, Lovenheim, & Turner, 2010).

Opponents of the high tuition / high aid approach have argued that it might be a good policy in theory, but in practice it too often turns out to be high tuition / low aid when budgets are tight (Freedman, 2013; Holt, 2013). Moreover, academic qualifications – rather than financial need – often guide the distribution of aid. High aid for students who can afford to pay, designed to keep them in state, in the public sector, or in a particular institution, does not solve the access and attainment problems.

The arguments against a laser focus on tuition levels do not mean that prices are irrelevant to college access and success. Both very high tuition levels and rapid increases in sticker prices can discourage enrollment, if not accompanied by generous and well-understood need-based aid policies (Avery & Kane, 2004). Too many potential students don't bother to apply to college at all because they think they won't be able to afford it. Others apply only to the institutions with the lowest price tags. Balancing moderate tuition levels and the avoidance of sudden and dramatic price increases with student aid targeted at those whose outcomes are most likely to be affected should be a goal for all states.

FREE COMMUNITY COLLEGE

Rather than focusing on more generous need-based grant programs, much of the current momentum appears to be in the direction of making community colleges tuition free. Tennessee led the way in this effort with the Tennessee Promise Program, in effect since 2015. Minnesota and Oregon have developed versions of this program. The Obama administration picked up on the idea as the basis for a national policy program. The incoming Congress is not likely to follow through with this idea, but a number of states, including Illinois and Wisconsin, are also considering the option (National Conference of State Legislatures, 2016).

The impact of such a program would be quite different from state to state because of differences in public two-year college tuition levels, available funding, and the share of the college population enrolled in the sector. For example, in fall 2014, 20 percent of public college enrollments in South Dakota and 22 percent in North Dakota were in two-year colleges. In contrast, 49 percent of Iowa's and 60 percent of Illinois' public college enrollment was in two-year colleges (Ma et al., 2016, Figure 21B).

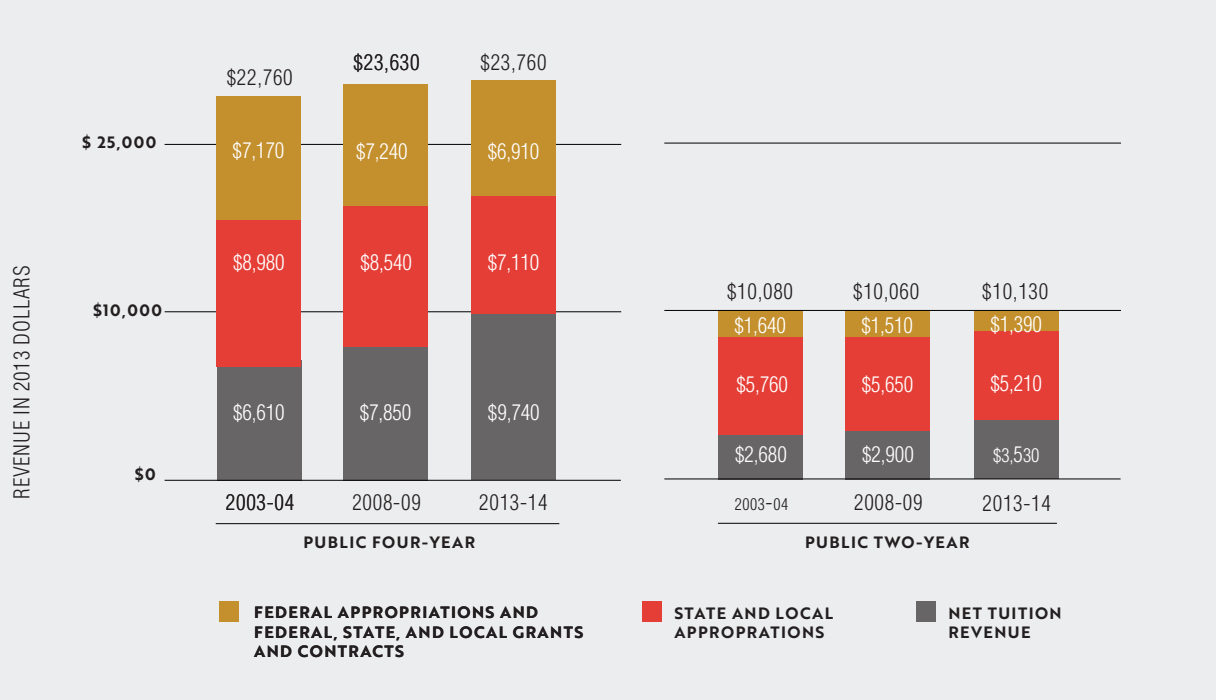
A key factor in predicting the impact of a free community college policy is whether the policy is "first dollar" or "last dollar." Under Obama's first-dollar proposal, tuition would be eliminated for all community college students. Exactly what combination of state and federal funding would make this possible, whether or not institutions would be able to replace tuition revenues, and to what extent states would cooperate are all live questions. But if the policy were implemented in the way it is described, students who now receive federal Pell Grants and state grants would retain those funds to cover books and supplies and living expenses. This type of program, with significant new funding for low-income students, would likely yield a positive effect on college access and completion.

In contrast, the Tennessee program and most of the other state-, local-, and institution-based programs are last-dollar programs that just fill in the gaps between published tuition prices and the grant aid students receive. The reality is that the majority of low-income students do not pay tuition and fees at public two-year colleges. In 2011-12, 85 percent of dependent students from the lowest family income quartile and 45 percent of those from the second quartile who were enrolled in public two-year colleges paid $0 in net tuition and fees (Ma et al., 2016, Figure 2015_14). The extra dollars generated by this type of program do not go to the neediest students, who already have their tuition and fees covered by state and federal grant aid. Instead, they go to students too affluent to qualify for need-based aid. This may not be a significant issue for some of the local programs serving populations that are almost entirely low- and moderate-income. But at the state level, the issue is significant.

Implemented at the state or national level, a last-dollar policy that directs incremental dollars away from the highest-need students has the perverse effect of counteracting federal student aid policies designed to narrow the financial resource gaps between lower- and higher-income students. The Pell Grant program awards the maximum grant to full-time students who, according to the federal need analysis formula, have no ability to contribute—either from their own resources or from those of their parents—to financing their education. The amount of the grant aid declines gradually as measured ability to pay increases. In contrast, a last-dollar grant program equalizes the total subsidy received by students at all income levels, eliminating any narrowing of the gaps in the funds available to students to finance college education. In other words, last-dollar programs undo the progressivity of the federal student aid system.

The principal objection to the policy of free community college is not that it is ineffective but that it fails to efficiently allocate taxpayer dollars. Indeed, there is considerable evidence that a clear and simple message of "free college" makes a difference, even without additional funding. Applications to and enrollment in Tennessee community colleges have increased and a measurable portion of the increase appears to come from students who would not otherwise have enrolled anywhere, even though the funding available to them has not changed (Smith, 2015). However, it should be possible to increase awareness of low net prices without the diversion of funds required to make college free for large groups of students with the ability to pay. Just posting the information on the web is not likely to be effective, but public information campaigns, personalized guidance for students, and active distribution of specific information to individuals could go a long way to solving this problem (Kelly, 2011). Experimental studies have demonstrated the significant impact of simple interventions on college enrollment among low-income students (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2012; Castleman & Page, 2014).

FIGURE 3. Institutional Revenues Per FTE Student, Public Institutions in 2013 Dollars, 2003–04, 2008–09, and 2013–14



Source: Ma, J., Baum, S., Pender, M., & Welch, M. (2016). *Trends in College Pricing 2016: Figure 16.*

Even if free community college is effective in promoting access, it is less clear whether it can enhance student success. Less than 40 percent of students who begin their postsecondary education by entering a community college earn a credential anywhere within six years (Shapiro et al., 2016). Just getting more students into these institutions is obviously not the solution to the educational attainment problem.

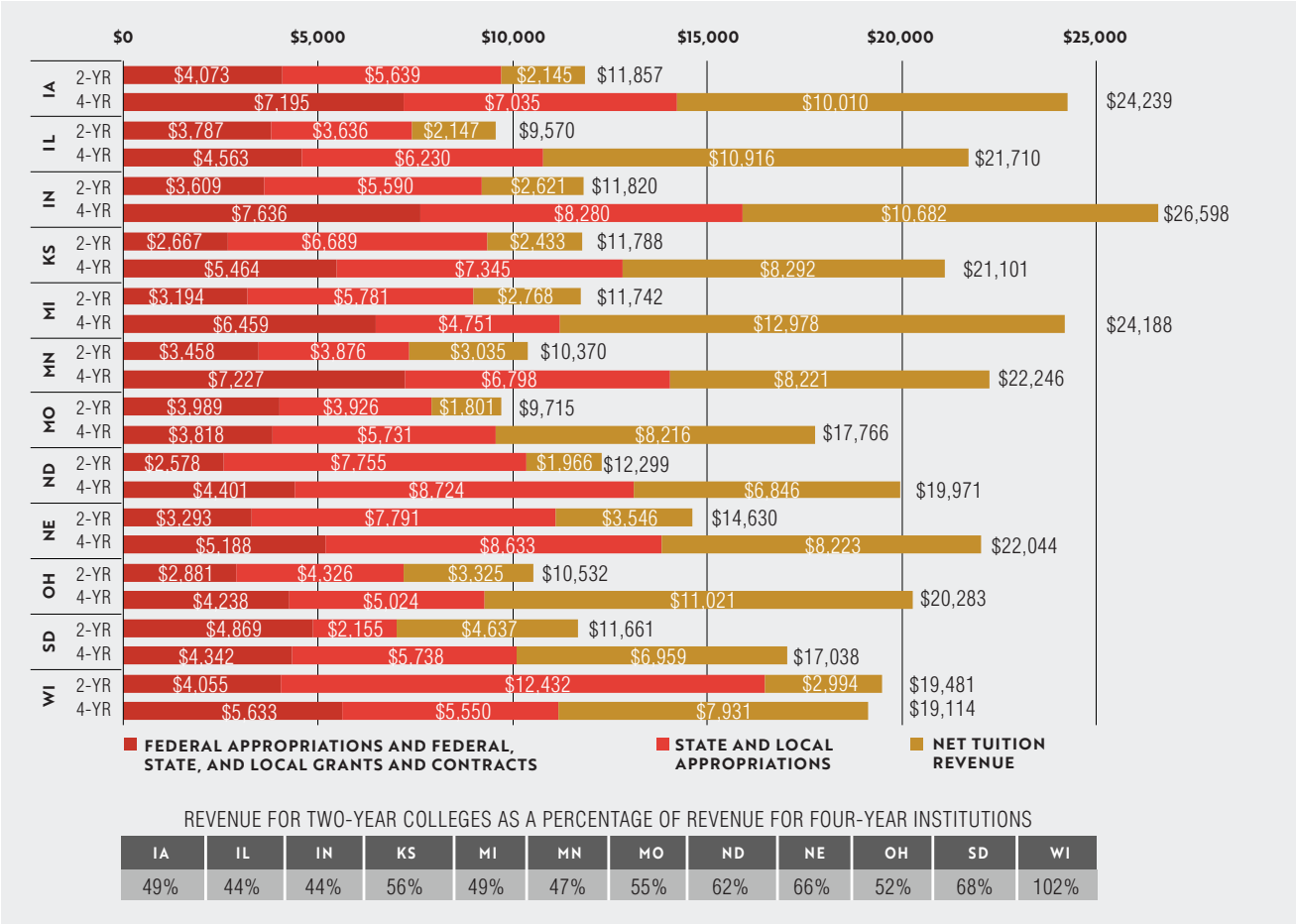
Research does not yet provide definitive answers to the following questions that are important in considering potential unintended consequences from free community college policies:

- Will students induced to enroll in community college because it is "free" succeed in earning credentials?
- Do community colleges have the necessary resources to support the larger student bodies they will attract—or even the student bodies they now enroll?
- Will eliminating tuition lead students to take longer to complete their programs?
- Will low-income students get the resources they need to cover living expenses while they are in school? Will students be induced to shift from four-year to two-year colleges, reducing the chances that they will ever earn bachelor's degrees?
- Will more affluent students, attracted by the free tuition, crowd less affluent students out of community colleges instead of attending selective public institutions?

ALLOCATING FUNDING ACROSS PUBLIC INSTITUTIONS

As noted above, institutional resources have a significant impact on the opportunities colleges can offer students and on success rates. Unfortunately, in most states subsidies are skewed toward the institutions with more affluent student bodies and away from those that enroll the vast majority of low-income and older undergraduates. As Figure 3 illustrates, in 2013-14, state and local appropriations per student averaged $5,210 per FTE student at public two-year colleges, compared with $7,110—36 percent more—at public four-year colleges and universities.

FIGURE 4. Institutional Revenues Per FTE Student in 2013–14: Public Institutions in the Midwest



REVENUE FOR TWO-YEAR COLLEGES AS A PERCENTAGE OF REVENUE FOR FOUR-YEAR INSTITUTIONS

IA	IL	IN	KS	MI	MN	MO	ND	NE	OH	SD	WI
49%	44%	44%	56%	49%	47%	55%	62%	66%	52%	68%	102%

Source: NCES. (2014). *IPEDS: Finance*. Estimates are weighted by FTE enrollment.

Figure 4 shows differences in revenue between public two-year and four-year institutions for the Midwestern states. State and local appropriations per student are higher for two-year than for four-year public institutions in Michigan and Wisconsin (estimated), but the reverse is true in the other states. The largest gaps are in South Dakota, where FTE students in public four-year institutions benefit from 2.66 times the average appropriation level at two-year institutions and Minnesota, where the ratio is 1.75. With the exception of the Wisconsin estimate, total revenues per FTE student at four-year public colleges and universities are higher in all states, ranging from 46 percent more than community college revenues in South Dakota to 125 percent more in Indiana and 127 percent more in Illinois.

This direct comparison somewhat exaggerates the difference in the amount of state funding spent on students enrolled at different types of institutions. Universities do not just educate undergraduates. They have graduate students, conduct research, and conduct public service programs. Moreover, upper-level undergraduates are generally more expensive than lower-level undergraduates studying in similar fields. And the required credentials make faculty salaries considerably higher at research universities than at other public institutions. On the other hand, many of the occupational fields for which community colleges train students require considerable amounts of equipment and expensive practical training.

However, the sizeable gaps in funding across sectors make it quite clear that students at community colleges and also at broad-access universities are receiving smaller subsidies than undergraduates at research universities (Baum & Kurose, 2013). If the goal is to improve college success rates for students whose chances depend most on external supports, it is time for states to rethink this funding imbalance.

CONCLUSION: DESIGNING EFFECTIVE STATE POLICIES

States have a variety of goals for their higher education funding policies, but diminishing financial barriers to educational attainment among the state's population should be prominent on all of these lists. Success in realizing this goal requires diminishing financial barriers for those with the lowest resource levels and finding strategies to assure students and families well in advance that the necessary funding will be available. It also requires strengthening both the institutions in which most low- and moderate-income students enroll and the academic preparation with which they come to college. All of these things cost money. Ensuring that limited state dollars are used as efficiently and equitably as possible will maximize the states' success. Several policy directions are worth pursuing:

- Dampening the fluctuations in funding at public colleges and universities allows both families and institutions to plan more effectively. Enrollment increases are not always easy to predict. But developing mechanisms for supplementing the funds available in the budget during tight economic times with funds carried over from other years can limit the swings.
- State funding for higher education provides subsidies directly to institutions, diminishing the extent to which they must rely on tuition revenues. It also provides financial aid directly to students. Moderate tuition levels and restrained growth in prices are important for both the perceptions of students and families and the barriers to college affordability. But need-based aid, which can target limited dollars to the students whose choices, behavior, and college success are most likely to be affected by the incremental dollars, is critical. Shifting the focus from just trying to moderate tuition to ensuring that the net prices paid by students with limited means are manageable and that institutions have the resources they need to offer high-quality educational experiences has the potential to help states meet their goals.
- Free community college tuition may be desirable in certain circumstances, but again, free or low tuition is not a silver bullet for increasing educational attainment. The biggest barrier to a successful community college education for low- and moderate-income students is not tuition. The majority of students who enroll in community colleges do not complete degrees or certificates. Under-resourced institutions are not able to provide the academic and personal supports they need. Moreover, it is covering living expenses—not paying tuition—that generates the greatest financial hardship. Last-dollar policies that just fill in the gap between existing financial aid and tuition and fees may be a productive approach in localities with low-income populations, but at the state level, first-dollar policies that provide additional dollars to the students who need them most are likely to be more effective.
- Focusing on targeting state dollars raises questions not just about the balancing of tuition and student aid policies, but also about the way state funds are distributed across institutions. Research universities engage in some important and expensive activities that are not part of the community college mission, but community college students, who come disproportionately from low- and moderate-income backgrounds, are shortchanged by the funding systems in many states. Modifying this reality is a key element of strengthening access to educational opportunity.

REFERENCES

Avery, C., & Kane, T. (2004). Student perceptions of college opportunities: The Boston COACH Program. In C. Hoxby (Eds.), *College choices: The economics of where to go, when to go, and how to pay for it* (pp. 355-394). Chicago, IL: University of Chicago Press.

Bailey, M., & Dynarski, S. (2011). Inequality in postsecondary education. In G. J. Duncan & R. J. Murnane (Eds.), *Whither opportunity? Rising inequality and the uncertain life chances of low-income children* (pp. 117-132). New York, NY: Russell Sage Foundation.

Baum, S., & Kurose, C. (2013). Community colleges in context: Exploring financing of two-and four-year institutions. In S. Baum & C. Kurose (Eds.), *Bridging the higher education divide* (pp. 68-73). New York, NY: The Century Foundation.

Becker, G. (2011, January 17). *The case for tuition increases at public universities* [Blog]. Retrieved from http://www.becker-posner-blog.com/2011/01/the-case-for-tuition-increases-at-public-universities-becker.html

Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: Results from the H&R Block FAFSA experiment. *The Quarterly Journal of Economics*, 127(3), 1205-1242.

Bound, J., Lovenheim, M. F., & Turner, S. (2010). Why have college completion rates declined? An analysis of changing student preparation and collegiate resources. *American Economic Journal: Applied Economics*, 2(3), 129-157.

Bowen, W. G., Chingos, M. M., & McPherson, M. S. (2009). *Crossing the finish line: Completing college at America's public universities.* Princeton, NJ: Princeton University Press.

Castleman, B. L., & Page, L. C. (2014). *Summer melt: Supporting low-income students through the transition to college.* Cambridge, MA: Harvard Education Press.

Freedman, J. (2013, July 10). *How not to help the poor: The lesson of soaring college prices.* Retrieved from http://www.theatlantic.com/business/archive/2013/07/how-not-to-help-the-poor-the-lesson-of-soaring-college-prices/277658

Heller, D. E. (1997). Student price response in higher education: An update to Leslie and Brinkman. *Journal of Higher Education*, 68(6), 624-659.

Holt, A. (2013, May 09). *The higher Ed arms race: How the high-tuition high-aid model shuts out low-income students.* Retrieved from http://preview.staging.newamerica.org/education-policy/the-higher-ed-arms-race-how-the-high-tuition-high-aid-model-shuts-out-low-income-students

Kelly, A. (2011, December 19). *Nothing but net: Helping families learn the real price of College.* Retrieved from https://www.aei.org/wp-content/uploads/2011/12/-nothing-but-net-helping-families-learn-the-real-price-of-college_084809849714.pdf

Ma, J., Baum, S., Pender, M., & Welch, M. (2016). *Trends in College Pricing 2016.* New York, NY: The College Board.

Illinois State University. (2016, January 25). *Grapevine.* Retrieved from https://education.illinoisstate.edu/grapevine

McPherson, M., & Schapiro, M. (1998). *The Student Aid Game.* Princeton, NJ: Princeton University Press.

National Association of State Student Grant and Aid Programs. (2016). *Repository: Annual surveys reportson state-sponsored financial aid* [Data file]. Retrieved from http://www.nassgap.org/viewrepository.aspx?categoryID=3

National Center for Education Statistics. (2014). *IPEDS: Finance.* Retrieved from https://nces.ed.gov/ipeds/Home/UseTheData

National Conference of State Legislatures. (2016, April 25). *Free community college.* Retrieved from http://www.ncsl.org/research/education/free-community-college.aspx

Shapiro, D., Dundar, A., Wakhungu, P.K., Yuan, X., Nathan, A. & Hwang, Y. (2015, November). *Completing College: A National View of Student Attainment Rates – Fall 2009 Cohort* (Signature Report No. 10). Herndon, VA: National Student Clearinghouse Research Center.

Smith, A. (2015, November 24). *Promise provides enrollment boost. R*etrieved from https://www.insidehighered.com/news/2015/11/24/promise-program-sharply-lifts-tennessee-college-freshman-enrollment

Turner, S. (2006). Higher tuition, higher aid and the quest to improve opportunities for low income students in selective, public higher education. In W. Ehrenberg (Eds.), *What's happening to public higher education* (pp. 251-274). Westport, CT: Greenwood Press for the American Council on Education.

Urban Institute. (2016). *Financing public higher education.* Retrieved from http://webapp.urban.org/higher-education/funding.html

Webber, D. (2016, September 13). *Fancy dorms aren't the main reason tuition is skyrocketing.* Retrieved from www.fivethirtyeight.com/features/fancy-dorms-arent-the-main-reason-tuition-is-skyrocketing

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Midwestern Higher Education Compact (MHEC)

A nonprofit regional organization assisting Midwestern states in advancing higher education through interstate cooperation and resource sharing. MHEC seeks to fulfill its interstate mission through programs that expand postsecondary opportunity and success; promote innovative approaches to improving institutional and system productivity; improve affordability to students and states; and enhance connectivity between higher education and the workplace.

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About this Policy Brief Series

This brief examines a critical state policy issue identified through the College Affordability Research Initiative, a collaboration between the Midwestern Higher Education Compact and the National Forum on Higher Education for the Public Good at the University of Michigan.