Strengthening State Higher Education Funding

Lessons Learned From K-12

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Bellwether

Introduction

Public investments in higher education are critical. Most Americans today need some education beyond high school to secure a well-paying job. By 2031, 72% of all jobs will require training beyond a high school diploma, and the fastest-growing industries are more likely to require postsecondary education.[1] For the shrinking number of occupations that do not have formal educational requirements, 80% earn below the national median income.[2] Higher education is also a key factor in social and economic mobility, playing an important role in boosting intergenerational income mobility for students from low-income families.[3]

Since states are important investors in public higher education and stewards of labor markets and economic goals, they will continue to shape the direction of public higher education funding. Approximately 12 million students attend public colleges and universities in the U.S.,[4] and states spend more than $90 billion annually to support these public institutions of higher education (IHEs) and the students they serve.[5] Higher education spending is typically the third-largest category of spending in most state budgets, after K-12 education and Medicaid.[6] Public colleges and universities rely heavily on these dollars, which represent their single-highest revenue source, ahead of both student-paid tuition and federal sources.[7] State support for public IHEs increases the enrollment slots available and boosts the benefits students receive. Increases to state higher education funding directly impact students' enrollment and educational attainment[8] and, in some cases, increase the likelihood that they will repay educational debt, own homes, and have better credit scores.[9] Students with education beyond high school also have higher average earnings, regardless of degree type.[10]

However, these benefits are not equitably available to all students. First-generation college students; students from low-income backgrounds; Black, Hispanic, and Native American students; and other systemically marginalized students are less likely to access higher education and earn a postsecondary degree or credential (Sidebar 1).[11]

SIDEBAR 1

Defining Systemically Marginalized Students

This report defines systemically marginalized students as those who are first-generation, from low-income backgrounds, from underrepresented groups (e.g., Black, Hispanic, and Native American), from rural areas, or face other barriers and discrimination that limit their access to and success in higher education.

To equalize access and increase affordability, states, the federal government, and IHEs have distributed $1.9 trillion in student aid, including both grants and loans, over the past 10 years.[12] These efforts to aid students directly, however, do not address funding disparities that exist between under-resourced and well-financed IHEs — disparities that translate into gaps in the programming and educational services that institutions can provide. Financial aid efforts alone are insufficient because they do not provide institutions with additional net revenue. Instead, financial aid revenues replace student-provided revenue sources. **To further equalize opportunity, states must understand options for how to improve the way they fund IHEs**. In many states, policymakers are already pursuing a variety of higher education finance reforms to address this need.

These equity challenges and efforts to address them are not unique to higher education. America's public K-12 system has been grappling with similar funding disparities for decades. Many states allocate less K-12 funding than is necessary to effectively support all students, and many use formulas and policies that enable school districts in wealthier communities to access more funding than districts in disadvantaged

communities.[13] In recent decades, dozens of states have attempted to combat this by revising or replacing their K-12 funding formulas, sometimes proactively and sometimes in response to court orders.[14] Through this process, K-12 policymakers, researchers, and advocates have debated and tested theories and various policy models.

This report identifies insights and lessons from K-12 that may be instructive as states rework the way they fund higher education. It is informed by a literature review, a policy landscape scan, and a series of interviews with K-12 and higher education leaders, researchers, and advocates. This research surfaced a set of fundamental challenges faced by states working to improve higher education finance. From that list, four topics and associated questions emerged that are also relevant across K-12 education:

EQUITY

How can states distribute funding to students and public IHEs with the greatest needs?

ADEQUACY

How much funding is enough to achieve desired outcomes?

COST SHARING

How can local governments and states share the cost of public higher education?

STABILITY

How can public IHEs secure consistent and predictable funding?

This report explores each of these four topics, analyzing the headwinds and tailwinds faced by the higher education field and insights from K-12 to uncover potential paths forward.

Equity: How can states distribute funding to students and public IHEs with the greatest needs?

Challenges in Higher Education

In the U.S., public IHEs are often funded unequally and largely without regard to the apparent need of their student populations. Funding determines what programs institutions can offer, what faculty they can hire, what services they can provide, and what price they can charge. This means that differences in funding translate into differences in the support, opportunities, and access available for students.[15]

This is especially true for Black and Hispanic students, who are disproportionately represented at community colleges, open-access universities,[16] and at historically Black colleges and universities (HBCUs) and Hispanic-serving institutions (HSIs).[17] HBCUs enroll 16% of all Black students in higher education, and HSIs enroll 40% of all Hispanic students in higher education.[18]

These same groups are underrepresented in large flagship public universities.[19] For example, in 2019, the University of Maryland's incoming class comprised only 10% Black students, even though Black students represented 34% of Maryland's graduating high school seniors that same year. Likewise, in 2019, only 10% of the incoming class at the University of Mississippi was Black, even though Black students represented 49% of Mississippi's graduating high school seniors that same year.[20]

These disparate enrollment patterns matter, not just because of the value diversity brings to higher education, but also because these institutions are funded differently.[21] Community colleges receive less revenue per student than four-year universities. Large flagship public universities generate more revenue per student than regional universities, and they also have greater financial assets, including endowments.[22]

The differences in enrollment patterns, combined with the differences in funding, lead to differences in per-student spending based on student demographics. Public IHEs spent, on average, almost $12,000 per student on instruction and student services in 2020. They spent 18% less on Black students and 19% less on Hispanic students.[23]

These funding disparities among Black and Hispanic students are part of a larger pattern of systemic underfunding for public HBCUs and other minority-serving institutions relative to their institutional peers.[24] More than half of all HBCUs are public institutions, making these disparities an important public policy issue.[25]

Many of the fiscal inequities that exist in higher education are a product of how states fund institutions. The most common method for funding public IHEs relies on prior-year allocations (the "base"), with adjustments made based on changing economic circumstances or state priorities.[26] The "base plus" approach, as it is known, usually adjusts for enrollment but does not adjust based on other institutional needs or characteristics, such as student poverty levels or regional geography. Even in states that do use a formula based on unique institutional characteristics, very few account for student demographics. As a result, most higher education allocation methods are inequitable; most states fail to provide additional resources to IHEs that serve more systematically marginalized students, even though it costs more to meet these students' educational needs and ensure they can succeed.

Some states are working to change this.

In California, the state's Student Centered Funding Formula (SCFF), passed in 2018, allocates additional funding based on the number of enrolled community college students who are Federal Pell Grant Program recipients, California College Promise Grant recipients, or who have attended high school in California but are ineligible for a Pell Grant because of their immigration status.[27] In addition, the formula provides supplementary funding to institutions for positive academic outcomes and a bonus for positive outcomes among Pell Grant and state Promise Grant recipients.

Texas also recently passed a revision to its community college funding formula, shifting nearly all of its funding to an outcomes-based model that weights for economically disadvantaged students (those receiving a Pell Grant), academically disadvantaged students (those who did not pass the Texas college readiness assessment),[28] and adult learners (students 25 years of age or older). Texas also provides a small amount of additional aid to community college districts with limited ability to raise local revenue.[29] Generally small and rural, these districts face higher costs due to diseconomies of scale, but they are less able to offset those expenses with local revenues. This is a common challenge not only in Texas but across the country.

Reforms in California, Texas, and elsewhere seek to fund IHEs based on current student and institutional needs rather than prior funding levels. However, they are not free of complications. Despite passing SCFF in 2018, California has yet to fully implement its new formula.[30] In addition, a significant body of research on outcomes-based funding raises concerns about whether Texas' model of funding — almost entirely based on student performance versus student enrollment — may exacerbate inequities by disadvantaging institutions serving high-poverty, low-wealth communities.[31]

Equity: Insights From K-12

The K-12 system has identified tools to help achieve greater equity in funding, even though it has not entirely closed funding gaps. Student-based formulas are the prevailing K-12 funding model in most states today. States with student-based formulas use "weights" to allocate additional resources to school districts according to the number or percentage of their enrolled students who require additional, more costly supports or services. Most states allocate additional state aid to districts based on the number or percentage of students who receive special education services, are English learners (ELs), or are economically disadvantaged (Table).[32] Some states also send additional resources to rural or small districts, since they face increased costs related to transportation and diseconomies of scale.

TABLE: K-12 FUNDING MEASURES USED BY STATES

Measure (Weight or Allocation)	Number of States
Poverty/Economic Disadvantage	45
ELs	49
Special Education	47
Sparsity	37

***Notes**: Includes the District of Columbia; sparsity refers to funding mechanisms related to small size or geographic location, such as enrollment, student density, or rurality.* ***Source**: EdBuild, "FundEd: National Policy Maps," 2024.*

In higher education, this concept of student-based funding can act to both improve the equitable distribution of resources across institutions and incentivize institutions to recruit students from systemically marginalized backgrounds. States like California and Texas have already introduced similar elements into their community college base calculations.[33] Louisiana includes enrollment-based weights for students from underrepresented minority groups (e.g., Black, Hispanic, Pacific Islander, and others) in its university funding systems.[34] Despite progress, there is significant room to improve higher education funding formula methodologies and implementation in these states and others.

Lessons from K-12 can inform strategies for improving equity in higher education funding formulas. However, higher education formulas may need to be more flexible and complex given the more diverse array of institutional missions and student goals.[35] For example, some public IHEs are residential while others are commuter schools; some run hospitals or research labs while others only provide instruction; some focus on non-credit-bearing programs (e.g., continuing education, language programs, and some certificate programs) while others offer graduate degrees.

Despite differences between K-12 and higher education, three best practices in K-12 funding have the potential to improve institutional and student equity at the higher education level.

1. Establish a student-based funding formula.
By using a student-based formula to determine and allocate higher education funding, policymakers can attach dollars to priorities that center student needs and establish a transparent, predictable starting point for annual allocations. This can establish a baseline level of fairness among institutions and allow higher education leaders to plan more effectively. By distributing these dollars upfront based on enrollment rather than on the back end based on outcomes, policymakers can enable IHEs to provide services and programs and avoid unintended consequences of performance-based funding incentives, including restricted access for systemically marginalized students and reduced funding for institutions serving higher-need students.[36] Policymakers can adjust this enrollment-based formula as needed over time, improving the distribution to align with evolving state priorities and needs.

2. Weight funding based on student needs. Weighting for student need in base funding enables state policymakers to direct additional resources to public IHEs serving higher concentrations of systemically marginalized populations. For example, some states include weights for Pell Grant recipients, students from low-income backgrounds, first-generation college students, and Black, Hispanic, and Native American students, among other student populations. Students from disadvantaged backgrounds often need additional support to succeed, and those support programs and services cost more to provide.[37] Funding weights may also serve as incentives for institutions to recruit and retain specific student populations.

3. Include weights for small and rural institutions or other institutional needs. As rural or isolated K-12 school districts incur higher costs due to diseconomies of scale, so do small and rural public IHEs. Rural IHEs far from the nearest metropolitan area may need to offer higher salaries to attract high-quality instructors, or they may need to pay a premium to internet service providers to run and maintain high-speed internet for their facilities.[38] These costs add up and may require additional resources to deliver an education comparable to that of an institution in a less remote or better-resourced location.

Lessons from K-12 can inform strategies for improving equity in higher education funding formulas.

Adequacy: How much funding is enough to achieve desired outcomes?

Challenges in Higher Education

Although many states have established attainment goals for their public IHEs, few have determined how much money is necessary to achieve them. Clear funding targets could guide policymakers as they set state priorities and deter them from cutting higher education funding and pushing costs onto students, which would exacerbate inequalities.[39] However, states have not set funding targets for two main reasons: 1) institutional variability and 2) lack of state constitutional obligation.

Institutional variability: It is difficult to calculate how much is enough, or adequate, for an institution to attain any defined level of achievement since public IHEs vary considerably from one another.

The higher education landscape includes many different types of institutions, from community colleges to research universities, and institutions have very different student populations, course offerings, and programs and degrees. Some IHEs also have access to resources that others do not, such as large investment funds, gifts from alumni, or an ability to charge higher tuition due to wealthier student demographics. Taken together, what is sufficient funding for one IHE may be insufficient for another.

Consider, for example, the additional supports public IHEs need to offer to students who are unprepared for college-level coursework. These schools often provide academic supports, such as tutoring or mentorship, to help students succeed in credit-bearing courses.[40] The traditional model of remediation requires students to take prerequisite, non-credit-bearing classes before they can enroll in regular credit-earning courses. However, research shows that students do better when they receive support directly in their credit-bearing courses.[41] Though effective, this approach is costly and typically requires more financial resources for public colleges and universities to implement.[42]

Additional infrastructure costs that some schools have are another example of institutional variability. A technical college offering a degree or certificate in welding or a public college with an advanced mechanical engineering program both require special machinery and lab facilities where students can engage in hands-on learning, resulting in larger facilities funding needs. Physical location can lead to unique challenges as well. For example, rural institutions can struggle to provide access to broadband internet or to address disproportionately high student mental health needs.[43]

The high degree of variation in institutional goals and priorities makes it challenging to envision a standard method for calculating adequate funding levels. Recently, however, researchers have used econometric methods to estimate adequate higher education funding. One study used a "costing out" methodology, a type of financial analysis often used by K-12 researchers, to estimate how much funding for Texas community colleges would be necessary to provide all students with affordable and accessible pathways to postsecondary certificates or degrees.[44] To arrive at those estimates, researchers modeled how much more it would cost for higher-need students to achieve outcomes similar to statewide averages. They concluded that Texas community colleges lack sufficient funding to provide equal success opportunities to disadvantaged groups, including first-generation, older (over age 24), economically disadvantaged, academically disadvantaged, and EL students.

Adequacy studies in education are controversial. Some researchers have questioned their value and legitimacy, in part because of their complexity and lack of good comparison data.[45] However, they can serve as a data-informed starting point in the absence of other methods and spur productive conversations on the questions of "how" and "how much."

Lack of state constitutional obligation: States do not typically set funding targets because their constitutions rarely require them to do so.

While states play a significant role in the establishment and funding of systems of public higher education, they do not guarantee that all individuals can access higher education.[46] Public higher education in the U.S. is broadly available but it is not a universal legal right. Only a handful of states have constitutional language establishing the state's responsibility to fund higher education.[47] Without state constitutional mandates pressuring policymakers to fund higher education at a specific level, they rarely establish such targets, placing more of an emphasis on students to pay for their own education.

All states do fund public higher education to some extent, with each using a different method to establish overall funding levels and allocate funding to individual systems or institutions. The common thread across many states is that funding is appropriated based on what is economically or politically feasible.[48] Rarely are funding levels set based on a research base, statutory target, or constitutional obligation dictating how much funding is needed.

Adequacy: Insights From K-12

All 50 states enshrine the right to a free K-12 public education in their constitutions, and more than three-quarters of them include specific language regarding funding requirements.[49] State courts have ruled that this language requires state governments to provide schools with a level of funding sufficient to meet constitutional obligations, thus establishing an important mechanism for accountability. While many states historically allocate less funding than advocates and researchers believe is necessary, when legislatures do fall short, advocates have legal recourse. In at least 39 states, districts or families have sued, arguing that schools lack sufficient funding to provide children with the quality of education guaranteed by the state's constitution. In many cases, courts have ordered increases to state aid as a result.[50]

Defining what level of funding is necessary, however, remains a challenge in K-12, just as it does in higher education. There are a variety of studies and methods to estimate the cost required to ensure all students reach academic proficiency, but all have serious shortcomings.[51] When the cost calculated by a study exceeds an amount the state legislature is willing or able to appropriate, policymakers often set aside the study's calculation. Illustrating this, a report prepared for the Maryland State Department of Education in 2014 evaluated the findings and impact of 10 years of adequacy research done in various states across the U.S., starting in 2003. Of the 39 pieces described by the authors, only six had their recommendations fully implemented.[52]

Higher education faces even stiffer headwinds, and higher education funding is unlikely to become constitutionally guaranteed in the near future. California stands out as an exception with the passage of Proposition 98, a 1988 amendment to its state constitution that establishes a minimum annual funding level for K-14 education. That measure is imperfect: It is complex, has been suspended during economic recessions, and has established not just a floor but also a ceiling on funding (Sidebar 2).[53] Still, California appears to be the only state with such an explicit higher education funding requirement.

SIDEBAR 2

A Deeper Look at California's Proposition 98

California voters passed Proposition 98 in 1988 to constitutionally safeguard a minimum level of state funding for K-12 and community college education. The initiative, sponsored by the California Teachers Association, the California State Parent Teacher Association, and the Association of California School Administrators, aimed to respond to educator and family concerns about inadequate school funding.[54] Funding had stagnated in the decade prior, in part due to the passage of Proposition 13 in 1978, which capped property taxes, significantly reducing state and local revenues and triggering cuts to schools.[55] While Proposition 98 did not increase funding, it guaranteed schools and community colleges would receive a minimum amount each year.[56]

To calculate the "minimum guarantee" under Proposition 98, the state runs three calculations, or tests, and determines which is operative in a given year. Under Test 1, K-14 schools are guaranteed about 40% of state General Fund revenue.[57] Under Test 2, the guarantee is based on prior-year funding levels adjusted for changes in K-12 attendance and per capita personal income. Under Test 3, the guarantee is based on prior-year funding levels adjusted for changes in K-12 attendance and state General Fund revenues. Community colleges receive about 11% of the minimum guarantee and K-12 schools receive the rest. With a two-thirds vote, the state Legislature can suspend the guarantee — something it has done twice during severe budget downturns.[58] In most years, Proposition 98 has protected funding for California schools and community colleges. At the same time, many advocates argue that Proposition 98 sets a ceiling, rather than a floor, on funding. That is because policymakers rarely spend more than the formula requires — even when economic conditions have enabled it.

In higher education, Proposition 98 sets up a divide between community colleges and four-year universities. While community colleges are guaranteed a minimum level of funding, the University of California (UC) and California State University (CSU) Systems enjoy no such protections. Since the late 1980s, funding for community colleges has steadily increased along with the state budget. Per-student state appropriations for UCs and CSUs, on the other hand, have steadily declined.[59]

It is hard to know how K-14 funding would look in California without Proposition 98, but research suggests that funding increases have tracked with inflation and enrollment changes, meaning schools may be no better or worse off under Proposition 98 than they might have been under some other structure.[60] Further research is needed on the extent to which Proposition 98 serves as a floor versus ceiling and had unintended consequences for UCs and CSUs.

There is no consensus in K-12 about the best way to estimate adequacy and establish state funding targets. However, lessons from K-12 point toward three potential recommendations for higher education policymakers, leaders, and advocates.

1. Establish funding targets that reflect state priorities as well as fiscal and political realities. Adequacy studies can help states estimate higher education funding needs and provide aspirational targets, but state legislatures must establish funding targets that are also fiscally and politically feasible. When it is impossible to align adequacy cost estimates with what states can afford, policymakers can establish funding growth targets and commit the state to progressing toward those targets over time. Further, they can legislatively commit to direct future increases in state dollars toward the students and institutions with the greatest need, as well as other state priorities, such as degrees and credentials aligned with high-demand, high-wage earning fields.

2. Include equity in adequacy definitions and calculations. For many years, lawyers and advocates focused their attention primarily on adequacy litigation as the mechanism for improving K-12 funding in states.[61] This route proved fruitful from a legal perspective, with dozens of cases won throughout the 1990s and early 2000s.[62] However, these efforts often made the case for increasing funding equally, not necessarily equitably, for all school districts. The challenge is that by adding money to the system without addressing underlying structural problems, including interdistrict funding disparities, inequities will persist. From a feasibility perspective, it may be easier for policymakers to achieve support for and pass adequacy reforms as compared with equity reforms — since an adequacy approach allows both high-wealth and low-wealth districts and institutions to benefit. To offer politically feasible proposals that address adequacy and equity priorities simultaneously, policymakers can pursue efforts to increase funding while also accounting for different levels of student and institutional need. This may mean offering proposals that increase funding for all institutions but that offer the biggest funding boosts for IHEs serving the highest-need student populations.

3. Explore options for extending a right to education beyond K-12 in state constitutions. A state constitutional right to higher education would not ensure adequate funding, but it is a tool that policymakers, higher education leaders, advocates, and students could use when calling for sufficient funding for higher education. State constitutional language could also open the door to litigation options for those seeking to leverage the courts to compel greater spending on higher education. Most high-impact cases in K-12 have hinged on the existence of state constitutional guarantees, and the extension of those guarantees beyond grade 12 could be a major catalyst for change in the field of higher education as well.

Adequacy studies can help states estimate higher education funding needs and provide aspirational targets, but state legislatures must establish funding targets that are also fiscally and politically feasible.

Cost Sharing: How can local governments and states share the cost of public higher education?

Challenges in Higher Education

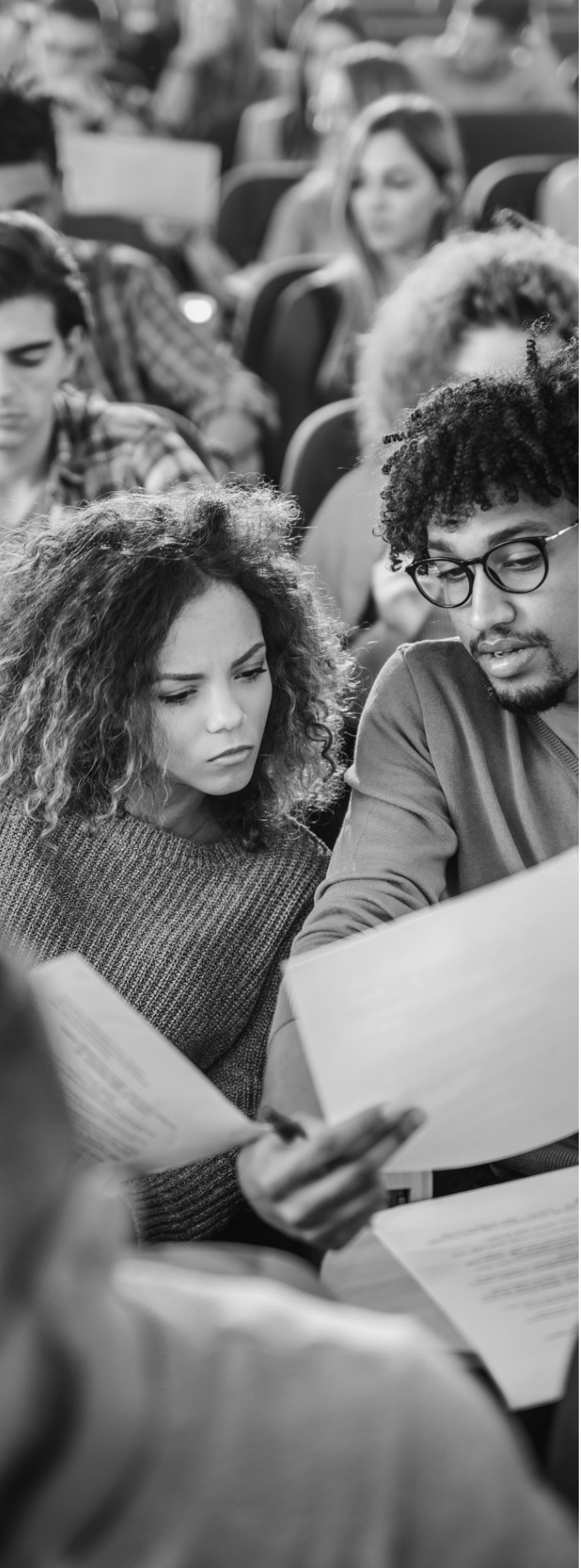
The role and responsibility of local communities in funding public higher education varies substantially across states and types of institutions. While state tax appropriations are the largest source of government funding for higher education nationally,[63] these funds are augmented by local revenues in 30 states.[64] Community colleges are most often the recipients of these local funds, and 20% of community college revenues come from local sources.[65] Typically, local revenue for higher education comes from property taxes, but in some states other types of local revenue support higher education, including redevelopment funds, utility taxes, timber or mineral severance taxes, and motor vehicle taxes.[66]

Tax policy experts generally agree that a mix of tax sources can mitigate volatility and ensure a more reliable tax base.[67] In the case of public IHEs, particularly community colleges, local revenue sources can increase overall funding and create a cushion in case of economic shocks or significant changes in state budgeting priorities.

The downside of the role local revenue often plays in institutional funding, however, is that it can drive disparities in funding based on variations in local property wealth from community to community. Property taxes are typically calculated based on the value of property located within a geographically bound tax district. If one tax district has a large manufacturing plant or high-value residential property, its local tax revenues will be higher per student than a district with less development.[68] Higher-value properties are often located in communities where residents earn greater incomes, meaning that wealthier communities can often generate more revenue for their local colleges based on their larger tax base and ability to pay. Conversely, lower-wealth communities usually generate less local property tax revenue, which means those IHEs are more dependent on other sources of revenue, such as state aid and tuition.[69]

Because community college students often attend an institution near where they live, this variation in local revenue capacity can exacerbate student affordability challenges.[70] Students from low-income backgrounds often have less ability to pay tuition and may require greater institutional support to succeed; however, institutions in those same communities may have fewer resources to provide support services or may charge greater tuition to do so.

States can smooth out these inequities by adjusting state allocations based on local property wealth. This process is often called "equalizing," and several states already do it, including California, Oregon, Texas, and Wisconsin. In Oregon, the state accounts for local revenue through its Community College Support Fund, adjusting allocations to colleges based on property tax revenues.[71] Using this data, the state fills in the gap between less and more wealthy areas, so that each community college receives approximately the same amount of funding per student. While a handful of states account for local wealth differences when allocating funding, of the 30 states in which local revenue funds a portion of higher education costs, few have any equalization policy in place.[72]



Cost Sharing: Insights From K-12

In K-12, local communities contribute a portion of tax revenue, usually through property taxes, to support their resident school districts. This is true in all states except Hawaii, which has a statewide system of public elementary and secondary schools, rather than individual school districts. Nationwide, roughly 45% of funding for public K-12 education comes from local sources.[73] As with higher education, these local funds can contribute to significant disparities between communities based on property wealth. And because of America's history of racial segregation by neighborhood, those disparities cut across not just socioeconomic but also racial lines.[74] A 2019 report found that districts with predominately non-white student populations received $23 billion less from state and local sources in aggregate nationally than districts serving predominately white students.[75]

Unless state policymakers equalize funding, districts with greater local revenues often benefit from higher-paid teachers, smaller class sizes, a broader range of course offerings, more extracurricular options, and advanced technology, while those in less prosperous areas may struggle to afford even the basics.[76]

Most states seek to equalize K-12 funding in some way. They typically begin by determining how much total funding a school district requires to provide educational services based on factors such as enrollment and student need. Sometimes this amount is called the "entitlement" or "target" funding. Then, they typically evaluate a district's "local fiscal capacity," a measure of how much a local district can raise or contribute in local revenue. By comparing the district's target to its local fiscal capacity, the state calculates how much of the total will be funded by the state versus the district, often referred to as state or local "share."

These and other state efforts to reform K-12 funding, which began in the early 1970s, have contributed toward marked reductions in funding disparities between lower- and higher-income districts.[77]

Despite the benefits of equalization programs and other similar finance reforms, state formulas and equalization policies have their limits. These cost-sharing approaches are often insufficient to close gaps entirely between high- and low-wealth communities.[78] State policymakers often evaluate local fiscal capacity when distributing state aid, ensuring that more state dollars go to higher-need communities. But they do not frequently cap, recapture, or redistribute local revenues, allowing wealthy districts to keep excess property tax revenues. It is politically difficult to pass policies that constrain local property taxes or recapture them to share tax wealth across districts because some communities lose out on funding that they might otherwise receive.

Cost-sharing policies that focus on equity have become a standard feature of K-12 finance policy and could also be standard in higher education. The experiences of K-12 stakeholders point toward three lessons for the postsecondary field.

1. Account for differences in revenue-generating abilities among communities. When constructing measures of local wealth, states should calculate the true revenue potential of a community, which is sometimes different from actual tax receipts. This means accounting for the specific tax policy details in each state. For example, one of the major criticisms of Illinois' community college equalization program is that it does not properly calculate taxable property values, which are less than actual property values due to state-mandated tax caps.[79] Illinois could calculate how much each community would reasonably receive at a standard, assumed level of tax effort, which would help the state accurately estimate the local revenue-generating potential of each community and separate the wealth measure from local decision-making. This is important because state policy should aim to disincentivize gamesmanship, whereby a community may decrease its tax rates in an effort to maximize state funding.

In some cases, accounting for local revenue-generating ability may mean looking beyond property taxes. For example, if local sales taxes contribute to higher education funding, states should include estimates for those dollars in their funding models.

2. Allocate additional state funding to institutions with less local tax revenue. To adjust for inequities in local revenue-raising capacity, the formula can estimate relative needs and allocate state funding accordingly. The most common way to achieve this in K-12 is to calculate a target funding level for each district separately and then deduct some estimate for how much local communities can raise themselves. There are several ways to approach the concept mathematically; however, the most important thing is to establish a standardized method for determining variations in local funding capacity and apportioning state revenue equitably on that basis. Districts in areas with less property tax wealth could receive more money, while districts in property tax-rich areas could receive less. In conjunction with an equity-based funding formula, this system would optimally distribute funding such that districts with less property wealth and more poverty receive more overall funding per student than districts with more wealth and less poverty.

3. Redistribute property tax revenue to communities with less. It is uncommon for policymakers to redistribute property taxes among institutions and districts. While politically difficult, redistribution can level the playing field among institutions in higher- and lower-wealth communities. For example, Texas captures "excess" property tax revenue from K-12 districts with significant property wealth and uses that money to help pay for the state's education formula. The state first calculates an entitlement amount based on a student-based funding formula. If a district raises less local revenue than that entitlement, the state then fills the gap with state aid. However, if a district

raises more revenue than its entitlement amount, the state "recaptures" that amount and uses the excess to help fill the revenue gaps in districts with less property wealth. Although simple in concept, the model is complex and has been revised numerous times since its inception in the early 1990s. It has also come under fire as just another revenue source for the state Legislature, which is constitutionally restricted from setting a statewide property tax but is able to use the recapture program to help pay its share of the education formula.[80] If the higher education sector were to adopt redistribution models, policymakers would need to carefully consider how to balance equity goals with the formula's structure to mitigate political and implementation challenges.

Cost-sharing policies that focus on equity have become a standard feature of K-12 finance policy and could also be standard in higher education.

Stability: How can public IHEs secure consistent and predictable funding?

Challenges in Higher Education

Public higher education funding is volatile, and this volatility manifests in two ways: 1) big swings in how much states budget for higher education from year to year, and 2) inconsistency in how much states distribute to each institution annually. For an institution, the resulting confusion and lack of clarity is the same. But from a policy perspective, budgetary volatility is far more complicated to solve.

Higher education is particularly sensitive to state budget fluctuations because, as a large and discretionary category of funding, and one that has tuition revenues and student loans to fall back on, state leaders tend to see it as an attractive area to cut during economic downswings.[81] Higher education funding sits at a little over 9% of state budgets on average; meanwhile, public welfare (23%)[82] and K-12 (21%), both larger budgetary items, often have far more stringent spending requirements.[83] State revenue fluctuations can make it difficult for institutions to plan and, in years when budgets dip, can prompt programmatic cuts or tuition hikes that are hard to reverse.

In states that depend heavily on volatile revenue sources like personal income taxes, higher education leaders experience an especially pronounced roller-coaster effect: When economic conditions are good and tax revenues peak, higher education and other state programs get a welcome bump.[84] When revenues dip, cuts follow. In states that rely more on stable revenue sources, like property taxes, public IHEs are less likely to suffer from economic shocks, although none is immune.[85]

Public higher education is subject not just to economic fluctuations but also to political priorities. Support for higher education, as with any public program, can ebb and flow as political leadership and public attitudes shift. A governor or legislative leader's views on public higher education can dramatically influence how much funding the sector receives. Complicating this is the fact that institutions are vying not just with other state programs for a piece of the proverbial pie, but with one another. Higher education institutions can be powerful lobbyists, such that a rising tide may not raise all boats equally.

In general, it is complicated for higher education leaders to estimate how much funding they will receive each year. Enrollment and demographic patterns fluctuate over time, and enrollment remains the main driver of higher education funding distribution in most states.[86] As a result, consistent declines in enrollment since 2010 have eroded funding for many systems.[87]

Some institutional leaders have embraced outcomes-based funding as a mechanism for stabilizing funding losses from enrollment declines while accommodating political demands for more institutional accountability. A number of states, such as North Carolina and Texas, have adopted outcomes-based models in recent years, but in the long term those, too, face stability challenges.[88] Performance indicators like persistence and on-time graduation fluctuate due to external factors like economic conditions, changes in K-12 policy, or demographic changes. Additionally, the amount of outcomes funding available is ultimately dictated by the legislature and subject to political decision-making, much like the portion of base funding that they are replacing.

Stability: Insights From K-12

K-12 education struggles with similar volatility issues.[89] Economic conditions, especially the rise and fall of state revenues, can cause K-12 funding to spike or plummet. Enrollment changes can also prompt swings in funding at the state level or for individual districts.

Making matters worse, state budget cuts during economic downturns can exacerbate K-12 funding inequities. States often apply cuts in an across-the-board fashion, slashing each school district's state aid portion by an equal percentage.[90] This translates into higher per-student cuts for districts more dependent on state aid than for districts where more funding comes from local sources. Districts with a larger local property tax base, which are usually wealthier communities, feel less of the pain.[91]

To reduce volatility in K-12 funding, especially for low-wealth districts with less local revenue to fall back on, state leaders have pursued the following four strategies that could be adapted to a higher education context (in addition to the equalization approaches discussed in the prior section).

1. Use multiyear average enrollment counts in funding formulas. One of the simplest ways to reduce volatility in state funding to IHEs is to use a multiyear average when calculating enrollments, something that some state higher education systems already do for their community colleges (e.g., California and North Carolina). The modification typically requires no major change to the funding formula but has the effect of smoothing out year-to-year fluctuations in what is often the most consequential variable in any model. It also lengthens the period that a district or institution has to adjust to drops in enrollment. Since enrollment drops are spread across multiple years, IHEs have more time to restructure staffing, programs, and other expenditures. This also prevents some of the emergency decision-making that has negative impacts on students.

To prevent adverse consequences for districts with growing enrollments, this policy can be paired with the option to use only the most recent year of data, or to have a separate policy entirely for institutions defined as "high growth" by the state.

2. Create formula-based models that allow IHEs to predict annual funding. States could use funding formulas to establish annual funding targets and to distribute funding to IHEs, as they do in K-12. Many, but not all, states have made this shift for two-year institutions, but few have done so when it comes to four-year institutions. When economic conditions make it challenging to hit those targets, clear state policies could guide how state leaders can adjust appropriations correspondingly and equitably. When cuts are necessary, policymakers could prioritize students and/or institutions most likely to be affected by reductions in state aid. While public IHEs with more local revenues, earned income, and endowments can better weather temporary budget reductions, institutions more dependent on state aid may be forced to cut into programming and services more quickly.[92] This means policymakers could avoid applying automatic percentage cuts across all IHEs but instead tier cuts based on need, a piece of advice given to policymakers regarding K-12 funding during the brief COVID-19 recession.[93]

In many states, K-12 funding formulas help district leaders predict and budget, even though economic and enrollment fluctuations may still inflict fiscal pain. When funding is based on clear, measurable inputs that remain unchanged year-to-year, public IHEs can also forecast future funding levels and create spending plans. Policymakers could review formulas on a regular schedule to ensure they are still achieving their goals — ideally every three to five years — but otherwise leave formulas constant.

3. Build up "rainy day" funds. While economic and budgetary volatility is inevitable, state policymakers can help mitigate the pain of economic cycles. Rainy day funds act as de facto state savings accounts by allowing policymakers to use savings to supplement general fund spending during economic downturns, ensuring continuity of essential services.[94] In 2021, all 50 states and the District of Columbia reported having at least one rainy day fund.[95] Several states maintain multiple rainy day funds and may dedicate funds to specific purposes, including education (e.g., California, which maintains a Public School System Stabilization Account for K-14 spending).[96]

4. Establish a statutory minimum percentage allocation of state revenues. Although relatively uncommon even in K-12, some states have established minimum guaranteed levels of funding for education. For example, California's Proposition 98 guarantees that a certain portion of the state General Fund will go to K-14 education. While this does not guarantee a fixed dollar amount, it does ensure that education is not cut disproportionately during tough economic times and that K-14 funding increases as the economy grows. To ensure greater predictability in higher education funding, states could take a similar approach, either establishing a baseline funding guarantee that secures a minimum level of financial support for institutions regardless of economic fluctuations or implementing a graduated funding scale that adjusts progressively to changes in economic indicators.

One of the simplest ways to reduce volatility in state funding to IHEs is to use a multiyear average when calculating enrollments.

Conclusion

As policymakers, advocates, and higher education leaders strive to improve public higher education funding systems, they can learn a great deal from the K-12 sector. With the advantage of several decades of policy innovations and progress stemming from court cases and pressure from families, public-sector unions, advocates, and other stakeholders, the sector has compiled a large amount of experience and research. Though the contexts of K-12 and higher education are distinct and often siloed from one another, they are interwoven in a shared mission to provide a high-quality education to students. Targeted and practical collaboration between the two fields could help drive a unified vision for education that truly prepares all students for the challenges and opportunities of the future. ✦

Summary of Key Insights

EQUITY

To improve the distribution of funding so state dollars are targeted toward students and institutions with the greatest needs, states can:

1. Establish a student-based formula to determine and allocate higher education funds.
2. Weight funding based on student needs to direct additional resources to public IHEs serving higher concentrations of systemically marginalized populations.
3. Include weights for small and rural institutions or other institutional needs.

ADEQUACY

To estimate and allocate enough funding to achieve desired higher education outcomes, states can:

1. Establish funding targets that reflect state priorities as well as fiscal and political realities.
2. Include equity in adequacy definitions and calculations.
3. Explore options for extending a right to education beyond K-12 in state constitutions.

COST SHARING

To ensure local governments and states are equitably sharing the cost of higher education, states can:

1. Account for differences in revenue-generating abilities among communities.
2. Allocate additional state funding to institutions with less local tax revenue to adjust for inequities in local revenue-raising capacity.
3. Redistribute property tax revenues to communities with less to level the playing field between institutions in higher- and lower-wealth communities.

STABILITY

To ensure IHEs have more consistent and predictable funding, states can:

1. Use multiyear average enrollment counts in their funding formulas to smooth out yearly fluctuations.
2. Create formula-based models that allow IHEs to predict annual funding.
3. Build up "rainy day" funds that states can use to fill revenue gaps during economic downturns.
4. Establish a statutory minimum percentage allocation of state revenues to ensure higher education receives a predictable share of state funding.

Endnotes

1 Anthony P. Carnevale, Nicole Smith, Martin Van Der Werf, and Michael C. Quinn, "After Everything: Projections of Jobs, Education, and Training Requirements through 2031," Georgetown University Center on Education and the Workforce/McCourt School of Public Policy, 2023, https://cew.georgetown.edu/cew-reports/projections2031/.

2 Emily Rolen, "Occupational Employment Projections through the Perspective of Education and Training," US Bureau of Labor Statistics, January 2019, https://www.bls.gov/spotlight/2019/education-projections/pdf/education-projections.pdf.

3 Ron Haskins, "VIII: Education and Economic Mobility," in *Economic Mobility Project*, Brookings Institution and The Pew Charitable Trusts, 2016, https://www.brookings.edu/wp-content/uploads/2016/07/02_economic_mobility_sawhill_ch8.pdf.

4 "Undergraduate Enrollment," in *Condition of Education*, National Center for Education Statistics, US Department of Education, 2023, https://nces.ed.gov/programs/coe/indicator/cha/undergrad-enrollment.

5 Authors' calculation using Integrated Postsecondary Education Data System (IPEDS), National Center for Education Statistics, 2022, https://nces.ed.gov/ipeds/datacenter/InstitutionByName.aspx?goToReportId=5&sid=3cb1f15f-6c60-413b-a7b0-c09466849ce3&rtid=5. All calculations were completed using "Public, 4-Year and Above" and "Public, 2-Year" institutions under Sector. Revenue data was pulled from "Public institutions — GASB 34/35," and "Revenues and other additions" for FY22. Federal, state, and local revenues were calculated by summing operating grants and contracts, appropriations, and non-operating grant variables for the three levels of government.

6 "Two Decades of Change in Federal and State Higher Education Funding," issue brief, The Pew Charitable Trusts, October 15, 2019, https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/10/two-decades-of-change-in-federal-and-state-higher-education-funding.

7 "Student-paid tuition" is the portion of tuition the student pays, including loans but excluding federal grants (e.g., Pell Grants). This calculation avoids double-counting dollars that are captured within the federal portion of institutional revenue. Integrated Postsecondary Education Data System (IPEDS), 2022.

8 Kristen Cummings, Sophia Laderman, Jason Lee, David Tandberg, and Dustin Weeden, "Investigating the Impacts of State Higher Education Appropriations and Financial Aid," SHEEO, May 2021, https://sheeo.org/new-analysis-finds-that-you-get-what-you-pay-for-state-higher-education-funding-directly-impacts-student-success/.

9 Rajashri Chakrabarti, Nicole Gorton, and Michael F. Lovenheim, "State Investment in Higher Education: Effects on Human Capital Formation, Student Debt, and Long-Term Financial Outcomes of Students," NBER working paper 27885, October 2020, https://www.nber.org/papers/w27885.

10 "Education Pays, 2022," Career Outlook, US Bureau of Labor Statistics, May 2023, https://www.bls.gov/careeroutlook/2023/data-on-display/education-pays.htm.

11 Christopher Avery, Jessica Howell, Matea Pender, and Bruce Sacerdote, "Policies and Payoffs to Addressing America's College Graduation Deficit," Brookings Papers on Economic Activity, Fall 2019, 93–172, https://www.brookings.edu/articles/policies-and-payoffs-to-addressing-americas-college-graduation-deficit/; Andrew Howard Nichols and Marshall Anthony Jr., "Graduation Rates Don't Tell the Full Story: Racial Gaps in College Success Are Larger Than We Think," Education Trust, March 5, 2020, https://edtrust.org/resource/graduation-rates-dont-tell-the-full-story-racial-gaps-in-college-success-are-larger-than-we-think/; "Native American Students in Higher Education," Postsecondary National Policy Institute, November 2023, https://pnpi.org/wp-content/uploads/2023/11/NativeAmericanFactSheet-Nov-2023.pdf.

12 $1.9 trillion calculated by summing "Total Federal, State, Institutional, and Other Aid" from 2012–13 through 2022–23. "Trends in Student Aid 2023," College Board, October 2023, https://research.collegeboard.org/media/pdf/trends-in-student-aid-presentation-2023.pdf.

13 Bruce D. Baker, Matthew Di Carlo, and Mark Weber, "The Adequacy and Fairness of State School Finance Systems," School Finance Indicators Database, January 2024, https://www.schoolfinancedata.org/wp-content/uploads/2024/02/SFID2024_annualreport.pdf.

14 Christopher A. Candelaria, Shelby M. McNeill, and Kenneth A. Shores, "What Is a School Finance Reform? Uncovering the Ubiquity and Diversity of School Finance Reforms Using a Bayesian Changepoint Estimator," EdWorkingPaper 22-587, June 2022, https://edworkingpapers.com/sites/default/files/ai22-587.pdf; Mark Lieberman, "How States are Rethinking Where School Funding Should Go," *Education Week*, February 2024, https://www.edweek.org/policy-politics/how-states-are-rethinking-where-school-funding-should-go/2024/02.

15 Barrett J. Taylor and Brendan Cantwell, *Unequal Higher Education: Wealth, Status, and Student Opportunity* (New Brunswick, NJ: Rutgers University Press, 2019), https://www.rutgersuniversitypress.org/unequal-higher-education/9780813593494/.

16 Anthony P. Carnevale and Jeff Strohl, "Separate & Unequal: How Higher Education Reinforces the Intergenerational Reproduction of White Racial Privilege," Georgetown University Center on Education and the Workforce, July 2013, Figure 7, http://cew.georgetown.edu/wp-content/uploads/SeparateUnequal.FR_.pdf.

17 "Minority Serving Institutions Program," US Department of the Interior, https://www.doi.gov/pmb/eeo/doi-minority-serving-institutions-program.

18 Ibid.

19 Joydeep Roy and Jingyi Su, "Trends in Enrollment Growth at Public Flagship Universities," Urban Institute, October 2022, https://www.urban.org/sites/default/files/2022-10/Trends%20in%20Enrollment%20Growth%20at%20Public%20Flagship%20Universities.pdf.

20 Lauren Lumpkin, Meredith Kolodner, and Nick Anderson, "Flagship Universities Say Diversity Is a Priority. But Black Enrollment in Many States Continues to Lag," *The Washington Post*, April 18, 2021, https://www.washingtonpost.com/education/2021/04/18/flagship-universities-black-enrollment/.

21 Nick Hillman, "Why Rich Colleges Get Richer & Poor Colleges Get Poorer: The Case for Equity-Based Funding in Higher Education," Third Way, November 20, 2020, https://www.thirdway.org/report/why-rich-colleges-get-richer-poor-colleges-get-poorer-the-case-for-equity-based-funding-in-higher-education; Taylor and Cantwell, *Unequal Higher Education: Wealth, Status, and Student Opportunity*; Charles T. Clotfelter, *Unequal Colleges in the Age of Disparity* (Cambridge, MA and London: Belknap Press of Harvard University Press, 2017).

22 Carnevale and Strohl, "Separate & Unequal: How Higher Education Reinforces the Intergenerational Reproduction of White Racial Privilege," Figure 8.

23 Nate Johnson, "Variations in Postsecondary Institution Spending on Instruction and Student Services by Race/Ethnicity and Gender," Postsecondary Analytics, https://postsecondaryanalytics.com/variations-in-postsecondary-institution-spending-on-instruction-and-student-services-by-race-ethnicity-and-gender.

24 J. Oliver Schak, "Dismantling Dire Disparities: A Closer Look at Racially Inequitable Funding at Public Four-Year Colleges and Universities," The Institute for College Access & Success, August 25, 2021, https://ticas.org/affordability-2/dismantling-dire-disparities-a-closer-look-at-racially-inequitable-funding-at-public-four-year-colleges-and-universities/.

25 "Fast Facts: Historically Black Colleges and Universities," National Center for Education Statistics, https://nces.ed.gov/fastfacts/display.asp?id=667; "About Hispanic-Serving Institutions (HSIs)," Hispanic Association of Colleges and Universities, https://www.hacu.net/hacu/About_HSIs.asp.

26 Sophia Laderman, Dillon McNamara, Brian Prescott, Sarah Torres Lugo, and Dustin Weeden, "State Approaches to Base Funding for Public Colleges and Universities," SHEEO and NCEMS, 2022, https://nchems.org/wp-content/uploads/SHEEO_NCHEMS_2022_StateApproaches_BaseFunding.pdf.

27 Robert Linden, "Understanding the Student-Centered Funding Formula," research brief 7, no. 3, UC Davis School of Education, September 2022, https://education.ucdavis.edu/sites/main/files/file-attachments/wheelhouse_research_brief_vol_7_n_3_final.pdf?1663872636; "Student Centered Funding Formula," California Community Colleges, https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/College-Finance-and-Facilities-Planning/Student-Centered-Funding-Formula.

28 Specifically, the weight includes all students who did not pass the Texas Success Initiative (TSI) assessment in any subject area.

29 "Formula Funding," Texas Higher Education Coordinating Board (TACC), https://www.highered.texas.gov/our-work/supporting-our-institutions/community-college-finance/formula-funding/.

30 Hold harmless provisions were initially supposed to roll off in 2021–22 but have been extended through 2024–25, and an indefinite funding floor based on 2024–25 funding levels are set to go into place starting in 2025–26. Source: "The 2022–23 California Spending Plan," Legislative Analyst's Office, October 2022, https://lao.ca.gov/Publications/Report/4632#:~:text=State%20Modifies%20SCFF%E2%80%99s%20Hold%20Harmless%20Protection.

31 Nicholas Hillman, "Why Performance-Based College Funding Doesn't Work," The Century Foundation, May 25, 2016, https://tcf.org/content/report/why-performance-based-college-funding-doesnt-work/; University of Houston, "Performance-Based Funding in Community Colleges Hinders Success of At-Risk Students," ScienceDaily, January 16, 2015, https://www.sciencedaily.com/releases/2015/01/150116134727.htm.

32 Indira Dammu, Bonnie O'Keefe, and Jennifer O'Neal Schiess, "How Can School Finance Systems Support Students with Additional Learning Needs?," Splitting the Bill no. 5, Bellwether, updated October 2023, https://bellwether.org/publications/splitting-the-bill.

33 "Formula Funding," Texas Higher Education Coordinating Board (TACC); Linden, "Understanding the Student-Centered Funding Formula."

34 "Louisiana's Outcomes-Based Funding Formula," Louisiana Board of Regents, 2021, https://regents.la.gov/wp-content/uploads/2021/07/LA-Outcomes-Based-Formula-Overview.pdf.

35 Jay B. Labov, "Changing and Evolving Relationships between Two- and Four-Year Colleges and Universities: They're Not Your Parents' Community Colleges Anymore," *CBE Life Sciences Education* 11, no. 2 (2012): 121–128, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3366895/; Roy Y. Chan, "Understanding the Purpose of Higher Education: An Analysis of the Economic and Social Benefits for Completing a College Degree," *JEPPA* 6, no. 5 (2016), https://scholar.harvard.edu/files/roychan/files/chan_r._y._2016._understanding_the_purpose_aim_function_of_higher_education._jeppa_65_1-40.pdf.

36 Justin C. Ortagus, Robert Kelchen, Kelly Rosinger, and Nicholas Voorhees, "Performance-Based Funding in American Higher Education: A Systematic Synthesis of the Intended and Unintended Consequences," *Educational Evaluation and Policy Analysis* 42, no. 4 (2020): 520–550, https://doi.org/10.3102/0162373720953128.

37 Jesse Levin, Bruce Baker, Jason Lee, Drew Atchison, and Robert Kelchen, "An Examination of the Costs of Texas Community Colleges," REL Southwest, October 2022, https://ies.ed.gov/ncee/rel/Products/Region/southwest/Publication/100875.

38 Rachel Rush-Marlowe, "Strengthening Rural Community Colleges: Innovations and Opportunities," Association of Community College Trustees (ACCT), February 2021, https://www.acct.org/sites/default/files/documents/2022-12/Strengthening%20Rural%20Community%20Colleges%202021.pdf.

39 Michael Mitchell, Michael Leachman, and Matt Saenz, "State Higher Education Funding Cuts Have Pushed Costs to Students, Worsened Inequality," Center on Budget and Policy Priorities, October 24, 2019, https://www.cbpp.org/research/state-budget-and-tax/state-higher-education-funding-cuts-have-pushed-costs-to-students.

40 Rachel Fulcher Dawson, Melissa S. Kearney, and James X. Sullivan, "Why Expanded Student Supports Can Improve Community College Outcomes and Boost Skill Attainment," Brookings, April 7, 2021, https://www.brookings.edu/articles/why-expanded-student-supports-can-improve-community-college-outcomes-and-boost-skill-attainment/.

41 Trey Miller and Paco Martorell, "Using Corequisite Remediation to Help Students Progress to College-Level Courses," MDRC, July 2022, https://www.mdrc.org/work/publications/using-corequisite-remediation-help-students-progress-college-level-courses#.

42 Fulcher Dawson, Kearney, and Sullivan, "Why Expanded Student Supports Can Improve Community College Outcomes and Boost Skill Attainment."

43 Rush-Marlowe, "Strengthening Rural Community Colleges: Innovations and Opportunities."

44 Levin, Baker, Lee, Atchison, and Kelchen, "An Examination of the Costs of Texas Community Colleges."

45 Eric A. Hanushek, "Science Violated: Spending Projections and the 'Costing Out' of an Adequate Education," in *Courting Failure: How School Finance Lawsuits Exploit Judges' Good Intentions and Harm Our Children* (Stanford, CA: Education Next Books, 2006), https://hanushek.stanford.edu/sites/default/files/publications/Hanushek%202006%20CourtingFailure-Science.pdf.

46 Emily Parker, "50-State Review: Constitutional Obligations for Public Education," Education Commission of the States, March 2016, https://www.ecs.org/wp-content/uploads/2016-Constitutional-obligations-for-public-education-1-1.pdf; Integrated Postsecondary Education System (IPEDS), National Center for Education Statistics.

47 Parker, "50-State Review: Constitutional Obligations for Public Education."

48 Laderman, McNamara, Prescott, Torres Lugo, and Weeden, "State Approaches to Base Funding for Public Colleges and Universities," 5.

49 Parker, "50-State Review: Constitutional Obligations for Public Education."

50 Martin R. West and Paul E. Peterson, "The Adequacy Lawsuit: A Critical Appraisal," in *School Money Trials: The Legal Pursuit of Educational Adequacy* (Washington, DC: Brookings Institution Press, 2007), https://www.brookings.edu/wp-content/uploads/2016/07/schoolmoneytrials_chapter.pdf.

51 Methodologies include cost function studies, professional-judgment studies, successful-schools/districts analysis, and evidence-based approaches; "Funding Formula Guidebook," Connecticut School Finance Project, November 2016, https://schoolstatefinance.org/resource-assets/Funding-Formula-Guidebook-2016.pdf.

52 Anabel Aportela, Lawrence O. Picus, Allan Odden, and Mark Fermanich, "A Comprehensive Review of State Adequacy Studies Since 2003," Maryland State Department of Education, September 12, 2014, https://marylandpublicschools.org/Documents/adequacystudy/AdequacyReviewReport_rev_091214.pdf.

53 Mac Taylor, "A Historical Review of Proposition 98," Legislative Analyst's Office, January 2017, https://lao.ca.gov/Publications/Report/3526; Jeffrey I. Chapman, "Proposition 13: Some Unintended Consequences," September 1998, Public Policy Institute of California, https://www.ppic.org/wp-content/uploads/content/pubs/op/OP_998JCOP.pdf.

54 Nirupama Jayaraman, "School Finance in California and the Proposition 98 Guarantee," California Budget Project, April 2006, https://calbudgetcenter.org/app/uploads/0604_prop98.pdf.

55 Chapman, "Proposition 13: Some Unintended Consequences [Report]," https://www.ppic.org/publication/proposition-13-some-unintended-consequences/.

56 Taylor, "A Historical Review of Proposition 98."

57 The legislature adjusted this percentage several times over the years when it made other shifts to the share of local property taxes going to schools and when it added an additional grade, Transitional Kindergarten.

58 Taylor, "A Historical Review of Proposition 98."

59 James Hawkins, Erin Heys, and Sarah Swanbeck, "Evaluating Higher Education Finance for California's Future," issue brief, Berkeley Institute for Young Americans, May 2022, https://youngamericans.berkeley.edu/wp-content/uploads/2022/05/Finance_higher_education.pdf.

60 Taylor, "A Historical Review of Proposition 98 [Report]"; Heather Rose, Jon Sonstelie, Ray Reinhard, and Sharmaine Heng, "High Expectations, Modest Means: The Challenge Facing California's Public Schools," Public Policy Institute of California, 2003, https://www.ppic.org/wp-content/uploads/content/pubs/report/R_1003HRR.pdf.

61 Known in some legal circles as a shift from "second wave" (equity focused) to "third wave" (adequacy) cases, which began in 1989. William E. Thro, "Judicial Analysis During the Third Wave of School Finance Litigation: The Massachusetts Decision as a Model," *Boston College Law Review* 35, no. 3 (1994), https://www.cnht.org/news/wp-content/uploads/2018/03/Judicial_Analysis_During_Third_Wave_School_Finance_Litigation.pdf.

62 West and Peterson, "The Adequacy Lawsuit: A Critical Appraisal."

63 "State and Local Backgrounders: Higher Education Expenditures," Urban Institute, https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/state-and-local-backgrounders/higher-education-expenditures; "Two Decades of Change in Federal and State Higher Education Funding," The Pew Charitable Trusts, October 2019, https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/10/two-decades-of-change-in-federal-and-state-higher-education-funding.

64 Authors counted as the number of states with institutions reporting local appropriations. West Virginia is not in the count because only one institution reports local appropriations, and that institution is also a high school. Integrated Postsecondary Education Data System (IPEDS), 2022.

65 Ibid.

66 "State Funding for Community Colleges: A 50-State Survey," Center for Community College Policy and Education Commission of the States, November 2000, https://www.leg.state.nv.us/App/InterimCommittee/REL/Document/8375; Response to information request on states with local funding for community colleges, Education Commission of the States, December 6, 2021, https://www.ecs.org/wp-content/uploads/State-Information-Request_Local-Funding-for-Community-Colleges.pdf.

67 Elizabeth McNichol, "Strategies to Address the State Tax Volatility Problem," Center on Budget and Policy Priorities, April 18, 2013, https://www.cbpp.org/research/strategies-to-address-the-state-tax-volatility-problem.

68 Alex Spurrier, Bonnie O'Keefe, and Jennifer O'Neal Schiess, "How Do Local Taxes Affect School Finance Equity?," Splitting the Bill no. 6, Bellwether, October 2021, https://bellwether.org/publications/splitting-the-bill/.

69 Ibid.

70 Nicholas Hillman and Taylor Weichman, "Education Deserts: The Continued Significance of 'Place' in the Twenty-First Century," American Council on Education, 2016, https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf.

71 "State Funding and Formula Summary: 2021–2023 Biennium," Oregon Higher Education Coordinating Commission, https://www.oregon.gov/highered/about/postsecondary-finance-capital/SiteAssets/Pages/public-university-funding/2021-23%20State%20Funding%20and%20Formula%20Summary.pdf.

72 Marcella Bombardieri, "Tapping Local Support to Strengthen Community Colleges," Center for American Progress, October 28, 2020, https://www.americanprogress.org/article/tapping-local-support-strengthen-community-colleges/#:~:text=Local%20property%20taxes%20are%20overwhelmingly,local%20funding%20for%20community%20colleges.

73 Alex Spurrier, Bonnie O'Keefe, and Jennifer O'Neal Schiess, "How Are Public Schools Funded?," Splitting the Bill no. 2, Bellwether, October 2023, https://bellwether.org/publications/splitting-the-bill.

74 Bruce D. Baker, Matthew Di Carlo, and Preston C. Green III, "Segregation and School Funding: How Housing Discrimination Reproduces Unequal Opportunity," Albert Shanker Institute, April 2022; Zahava Stadler and Jordan Abbott, "Crossing the Line: Segregation and Resource Inequality between America's School Districts," New America, updated February 29, 2024, https://www.newamerica.org/education-policy/reports/segregation-and-resource-inequality-between-americas-school-districts/.

75 "$23 Billion," EdBuild, 2019, https://edbuild.org/content/23-billion.

76 Bruce D. Baker, "How Money Matters for Schools," Learning Policy Institute, December 13, 2017, https://learningpolicyinstitute.org/product/how-money-matters-report.

77 C. Kirabo Jackson, Rucker Johnson, and Claudia Persico, "The Effect of School Finance Reforms on the Distribution of Spending, Academic Achievement, and Adult Outcomes," working paper 20118, National Bureau of Economic Research, revised August 2014, https://www.nber.org/papers/w20118.

78 Alex Spurrier, Bonnie O'Keefe, and Biko McMillan, Forthcoming, "Leveling the Landscape: An Analysis of K-12 Funding Inequities Within Metro Areas," https://bellwether.org/publications/leveling-the-landscape/.

79 "An Examination of the Finances of Illinois Community Colleges: State Funding for Community Colleges," The Civic Federation, August 24, 2018, https://www.civicfed.org/civic-federation/blog/examination-finances-illinois-community-colleges#:~:text=State%20Funding%20for%20Community%20Colleges.

80 "Robin Hood in Texas: A Look at Recapture's Impact on Students, Taxpayers, and the State Budget," Texas School Coalition, February 2022, https://recapturetexas.org/wp-content/uploads/2022/01/Robin-Hood-in-Texas.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=sendto_localnewslettertest&stream=top.

81 Denisa Gándara, Meredith S. Billings, Paul G. Rubin, and Lindsey Hammond, "'One of the Weakest Budget Players in the State': State Funding of Higher Education at the Onset of the COVID-19 Pandemic," *Educational Evaluation and Policy Analysis* (2023), https://journals.sagepub.com/doi/full/10.3102/01623737231168812.

82 Primarily Medicaid payments, but the Census does not separate Medicaid into its own category.

83 "State and Local Backgrounders: Higher Education Expenditures," Urban Institute.

84 Yolanda K. Kodrzycki, "Smoothing State Tax Revenues over the Business Cycle: Gauging Fiscal Needs and Opportunities," research department working paper 14-11, Federal Reserve Bank of Boston, 2014, https://www.bostonfed.org/publications/research-department-working-paper/2014/smoothing-state-tax-revenues-over-the-business-cycle-gauging-fiscal-needs-and-opportunities.aspx.

85 James Alm, "A Convenient Truth: Property Taxes and Revenue Stability," *Cityscape: A Journal of Policy Development and Research* 15, no. 1 (2013): 243–246, https://www.huduser.gov/portal/periodicals/cityscpe/vol15num1/Cityscape_March2013_conv_truth.pdf.

86 InformEd found that nearly 40% of four-year systems and over 70% of two-year systems have enrollment components in their funding formulas. Mitchell Lingo, Robert Kelchen, Dominique Baker, Kelly Rosinger, Justin Ortagus, and Jiayao Wu, "The Landscape of State Funding Formulas for Public Colleges and Universities," working paper, InformEd States, December 2021, https://static1.squarespace.com/static/5d9f9fae6a122515ee074363/t/61bbb8eebd907c6e6accdb51/1639692527480/ISPaper_TheLandscapeofStateFundingFormulasforPublicColleges.pdf.

87 "Table 303.70: Total Undergraduate Fall Enrollment in Degree-Granting Postsecondary Institutions, by Attendance Status, Sex of Student, and Control and Level of Institution: Selected Years, 1970 through 2031," National Center for Education Statistics, https://nces.ed.gov/programs/digest/d22/tables/dt22_303.70.asp.

88 Sara Weissman, "North Carolina Community Colleges Push for Workforce-Focused Funding Model," *Inside Higher Ed*, February 1, 2024, https://www.insidehighered.com/news/institutions/community-colleges/2024/02/01/north-carolina-community-colleges-propose-new.

89 Sylvia Allegretto, Emma García, and Elaine Weiss, "Public Education Funding in the U.S. Needs an Overhaul," Economic Policy Institute, July 12, 2022, https://www.epi.org/publication/public-education-funding-in-the-us-needs-an-overhaul/.

90 Krista Kaput and Bonnie O'Keefe, "Fortifying Funding: How States Can Strengthen Education Finance Systems for the Future," Bellwether, February 2023, https://bellwether.org/publications/fortifying-funding/.

91 Ibid.

92 David J. Deming and Christopher R. Walters, "The Impact of State Budget Cuts on U.S. Postsecondary Attainment," NBER, February 2018, https://scholar.harvard.edu/files/ddeming/files/dw_feb2018.pdf.

93 "Protecting High-Poverty Districts From State Funding Cuts," The Education Trust, https://national.edtruststag.org/covid-funding-cuts; Victoria Lee and Kristin Blagg, "'Equal' K–12 State Funding Cuts Could Disproportionately Harm Low-Income Students," Urban Institute, July 31, 2020, https://www.urban.org/urban-wire/equal-k-12-state-funding-cutscould-disproportionately-harm-low-income-students.

94 "Briefing Book: State and Local Tax Policies," Tax Policy Center, https://www.taxpolicycenter.org/briefing-book/what-are-state-rainy-day-funds-and-how-do-they-work.

95 "Budget Processes in the States," National Association of State Budget Officers, 2021, https://www.nasbo.org/reports-data/budget-processes-in-the-states.

96 Kathryn White, "State Budget Processes Spotlight: Rainy Day Funds" (blog), National Association of State Budget Officers, https://community.nasbo.org/budgetblogs/blogs/kathryn-white/2022/02/03/state-budget-processes-spotlight-rainy-day-funds.

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About Bellwether

Bellwether is a national nonprofit that exists to transform education to ensure systemically marginalized young people achieve outcomes that lead to fulfilling lives and flourishing communities. Founded in 2010, we work hand in hand with education leaders and organizations to accelerate their impact, inform and influence policy and program design, and share what we learn along the way. For more, visit **bellwether.org**.

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