

# PAVING THE PATH TO DEBT-FREE COLLEGE

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THE INSTITUTE FOR COLLEGE  
**ACCESS & SUCCESS**



# Acknowledgments

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# 01

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## Introduction

Both the federal and state governments make large investments in higher education. State governments operate public colleges and universities, which collectively serve 75 percent of undergraduates, while the federal government provides financial aid directly to students through its voucher-like student aid programs, in addition to providing research funding and other institutional supports.



In the 2021–22 academic year, the federal government provided \$234.6 billion in aid to undergraduate and graduate students in the form of federal grants, loans, tax credits, and federal work-study funds, while state and local governments spent \$109.5 billion (excluding pandemic relief funds).<sup>1</sup>

However, while state systems rely heavily on federal aid, they share **no official direct relationship**. This disconnect impedes federal-state coordination to lower college costs, reduce reliance on debt, and improve institutional quality.

Meanwhile, state support for public higher education has been declining for decades, and the cost of college has shifted ever more from a public responsibility to an individual one. The cost of attending once-affordable public institutions continues to rise, most students take on debt to pay for college, and many colleges lack the resources to adequately support their students.<sup>2</sup>

Open-access public colleges, as well as public Historically Black Colleges and Universities (HBCUs) and other minority-serving institutions, face particular challenges. They are chronically underfunded compared to other public institutions, leaving them with inadequate resources to support student success.

**State support for public higher education has been declining for decades, and the cost of college has shifted ever more from a public responsibility to an individual one.**

There is broad agreement that this system is unsustainable not only for students but for colleges, states, and the federal government. To address these issues, policymakers have considered creating an official partnership between states and the federal

government. Ideally, such a partnership would incentivize states to better — and more equitably — fund their public institutions, with the goal of increasing investments to lower costs for students and improve institutional quality.

To guide policymakers as they weigh such proposals, The Institute for College Access & Success (TICAS) commissioned a group of leading academics to write the following series of papers. The goal of these papers is not to establish the definitive, optimal way to design a path to debt-free college. Rather, they are meant to inform the policy conversation about how to most effectively and equitably address the ongoing crisis of high costs, high debt burdens, and decreasing confidence in the value of higher education.

The first three papers outline the current college financing landscape, examine the trade-offs of recent federal-state funding partnership proposals, and discuss potential policy options for reducing reliance on debt, including implementing state and local promise programs and increasing funding to historically underserved institutions.

- **State and Federal Partnerships for College Affordability: Assessing the Options.**

Jennifer Delaney and William Doyle consider the structural barriers facing state support for higher education and evaluate four recent federal-state partnership proposals. Their analysis details underlying assumptions in the higher education system and cost challenges faced by the sector, the diversity of higher education systems and funding models across the states, and structural barriers that higher education funding faces within state budgets.

- **Creating a Federal-State Partnership to Guarantee Affordability for Students Through Free College.**

Kelly Rosinger tracks the growth in free college programs at the local and state levels, provides an overview of design variations, and outlines policy recommendations for designing an equitable and effective federal free college program.

<sup>1</sup> College Board. *Trends in College Pricing and Student Aid 2022*. 2022. <https://bit.ly/3XTp9y1>; SHEEO. *State Higher Education Finance FY 2021*. 2022. <https://bit.ly/3jgSyTP>.

<sup>2</sup> The Institute for College Access & Success. 2019. *Dire Disparities: Patterns of Racially Inequitable Funding and Student Success in Public Postsecondary Education*. <https://bit.ly/2Zn7TXL>.

- **Federal-State Partnerships: Why Centering Support for Rural, Regional, and Minority-Serving Institutions Can Improve College Affordability and Student Success in the United States**

Vanessa Sansone examines the funding disparities between public flagship universities and Rural-Serving Institutions, Regional Comprehensive Universities, and Minority-Serving Institutions — and how these disparities contribute to a lack of resources for colleges that serve a racially and economically diverse student body. The paper presents recommendations for expanding funding at open-access universities to improve overall educational attainment and close equity gaps in enrollment and completion rates.

The second group of papers examine specific components that could be addressed as part of a larger federal-state funding partnership proposal: using longitudinal data to close equity gaps; improving student academic outcomes by establishing minimum standards for faculty; and how research institutions can preserve the research mission while limiting students' exposure to associated costs.

- **Improving and Using Data to Close Success Gaps.**

David Troutman discusses how more (and better) longitudinal data can inform policymakers in their quest to reduce success gaps, and outlines ways the federal government can incentivize states to collect, link, report, and act on such data.

- **Ensuring Instructional Quality with Increasing Reliance on Non-Tenure-Track Faculty.**

Di Xu examines the impact that contingent and part-time faculty utilization can have on student outcomes and faculty well-being, alongside concerns that a major new federal funding injection could spur increased enrollment and further accelerate the use of such faculty. The paper then discusses how policymakers can address these concerns in a federal-state funding partnership.

- **The Research Mission and College Affordability: Context and Policy Recommendations.**

Brendan Cantwell examines the role of research universities in the college affordability discussion, including the importance of the research mission, how the research mission has expanded, and how some of the costs of research are passed on to students. He then outlines ways that policymakers can preserve the research mission while limiting students' exposure to the cost of research.

Collectively, these papers help strengthen and expand the public policy conversation about how the federal government can partner with states, local governments, and colleges to support universal and open access to low- or no-cost, high-quality, and diverse postsecondary pathways.



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# Paving the Path to Debt-Free College

TICAS believes we must strive for a future where all students can earn a four-year degree at a public college without needing to take on debt. Covering tuition alone — and especially doing so only for community colleges, where other costs of attendance can be more burdensome than tuition itself — will not truly move the needle on affordability (or sufficiently increase completion rates). To do so, federal policymakers must fully address the “affordability gap” that remains after federal and state aid is applied toward the total cost of attending a public college.

To build this debt-free future for all students, the federal government and states must work together. Via such a partnership, the federal government should send new funding to states to equip them to make sustainable and equitable investments in public institutions, with a focus on historically underfunded institutions such as community colleges, regional public universities, Historically Black Colleges and Universities, and Minority-Serving Institutions. Through this funding — and in tandem with state investments — policymakers can reduce costs, with the goal of eliminating students’ need to borrow to earn a four-year degree from any public institution.

A well-designed partnership must be just that: a partnership. Each state has its own higher education ecosystem, and a one-size-fits-all approach will not work. By accounting for the wide variation across states and taking a cooperative design approach, federal lawmakers can build a system that has a higher likelihood of uptake and more enthusiastic long-term buy-in from state policymakers.

# 02

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## State and Federal Partnerships for College Affordability: Assessing the Options

BY: JENNIFER A. DELANEY AND WILLIAM R. DOYLE

Higher education is a key driver of economic mobility in the United States (Chetty et al., 2017). Both state and federal governments benefit from an educated workforce and the increased tax collections from those employed with postsecondary degrees. Society benefits from having a well-educated citizenry that helps to ensure a well-functioning democracy, civic engagement, and increased voting rates (McMahon, 2009, 2021; McMahon & Delaney, 2021).



Higher education provides considerable additional benefits such as improvements in health, charitable giving, volunteerism, as well as reduced crime and incarceration rates (Ma et al., 2019; McMahon, 2009, 2021). For individuals, the returns to a postsecondary credential are substantial (Chetty et al., 2017; Oreopoulos & Petronijevic, 2013). As compared to individuals with only a high school credential, four-year college graduates are more likely to be employed and make on average \$1 million more in wages over their lifetime; individuals who obtain an associate's degree earn about \$325,000 more (Abel & Deitz, 2014).

Increasing college prices are a barrier to college access and success. Net prices, the amount that students pay to attend college after taking grants into account, have outpaced inflation in both the two- and four-year sectors. Since 1991–92, tuition and fees at public four-year colleges has increased 2.58-fold and public two-year college prices rose 1.65-fold after accounting for inflation (College Board, 2021). Higher prices have put college out of reach for many. These price increases and the rapid pace of their expansion have also contributed to unprecedented student debt levels with outstanding debt surpassing \$1.6 trillion (Leukhina, 2020).

Federal and state governments share responsibility for making college affordable. States provide funding for public colleges, which helps to keep tuition lower than it might otherwise be. States also fund financial aid programs, which help to lower the prices charged to students (Toutkoushian & Shafiq, 2010). The federal government provides need-based grants to increase affordability, and also provides loans<sup>1</sup> and tax credits which help students attend.

Recently, state and federal efforts to ensure that college is affordable have been in parallel, not the result of joint federal-state programs. This is in contrast to joint federal-state programs in many other important areas such as health care and transportation. While there have been many calls for renewed federal-state partnerships and proposals to redesign federal and state responsibilities for funding higher education,

none have come to fruition (Tandberg & Anderson, 2020; Deming, 2017). For example, America's College Promise, which would have established free community college nationwide using federal funds and a 20 percent phased-in state match, was proposed in 2021 by President Biden, but has not been enacted (Whitford, 2021).

**Since 1991–92, tuition and fees at public four-year colleges has increased 2.58-fold and public two-year college prices rose 1.65-fold after accounting for inflation.**

**COLLEGE BOARD, 2021**

There is a long history of federal-state partnerships for higher education in the U.S. These types of partnership were critical to the development of state student aid. The 1992 Leveraging Education Assistance Partnership (LEAP) in its initial iteration offered a one-to-one federal match for state investment in need-based aid. This program began in the 1972 Higher Education Act (HEA) reauthorization as the State Student Incentive Grant (SSIG), but has not been funded since 2010. The 1998 Special Leveraging Educational Assistance Partnership (SLEAP) provided similar incentives matching one federal dollar for every two state dollars for need-based aid in states using LEAP funds. In 2008, SLEAP was replaced with the Grants for Access and Persistence (GAP) program (Dziesinski, 2022; Carey & Palmer, 2021). LEAP included a maintenance of effort (MOE) provision to compel states to maintain prior spending levels of need-based aid (at a minimum, the average level of the previous three years). This provision helped to ensure that states would match federal funds and not treat the program as a pass-through.<sup>2</sup> A MOE was also used with the College Access Challenge Grant program that was last funded in 2014 (U.S. Department of Education, n.d.).

<sup>1</sup> Some forms of federal student aid could be considered a federal-state partnership, but this brief is focused on state support for higher education and these types of programs are beyond the scope of the brief. Most federal student aid programs function as vouchers that can be taken to any institution, public or private, which makes them functionally different from a true partnership that combines federal and state funds. Some loan repayment plans, like income-dependent repayment, also transfer federal benefits to borrowers on a delayed timeline after college attendance, but typically do not operate in partnership with states.

<sup>2</sup> There was also a proportional enrollment provision for the allocation of LEAP funds across states.

The 1972 HEA reauthorization that created SSIG (later LEAP) also created the Basic Educational Opportunity Grant program (later Pell) to provide direct federal funding to students from low-income backgrounds. These programs reflected a vision of federal and state efforts working in tandem, with states ensuring low tuition at public institutions, and the federal government providing additional direct grant funding to students who need more assistance. When LEAP was defunded, the loss of federal matching dollars closed a number of need-based student aid programs in the states. In 2011, LEAP-specific need-based financial aid programs closed in Colorado, Connecticut, Idaho, Louisiana, Nevada, North Carolina, and Virginia (Dziesinski, 2022). Other states with LEAP-funded need-based aid programs did not offer alternative need-based grant aid to residents. Concerningly, the end of LEAP ended all need-based student aid in Georgia, Mississippi, Nebraska, New Hampshire, South Dakota, Utah, and Wyoming. Only two of these states—Nebraska and Utah—restarted need-based aid programs within a year (Dziesinski, 2022). Despite calls to reauthorize LEAP, these long-running federal matching programs are currently dormant (Carey & Palmer, 2021).

Despite the absence of an ongoing federal-state partnership, the idea of a partnership has remained salient and there have been a few short-term, temporary partnerships that emerged during the Great Recession and COVID-19 global pandemic. Federal stimulus in these short-term, temporary partnerships has been shown to both bolster and shape state behavior toward higher education (Delaney, 2014). Past iterations of federal stimulus programs during economic downturns include the American Recovery and Reinvestment Act of 2009 (ARRA) and the Higher Education Emergency Relief Fund (HEERF) that was a part of the Coronavirus Aid, Relief, and Economic Security Act of 2020 (CARES Act). Federal stimulus funds during both the Great Recession and the COVID-19 global pandemic were carefully structured using MOE provisions so the federal funds did not become a pass-through, but instead preserved state support for higher education. While waivers were available, with ARRA 2009, states typically followed the rules of the MOE provisions (Delaney,

2014). While these MOE provisions were effective, they were limited in scope. For example, MOE provisions in ARRA 2009 only applied to state appropriations to institutions and not student aid. As a result, student aid was cut by most states during the Great Recession (Delaney, 2014).

## For students from low-income backgrounds, the odds of college attendance are shaped by the state where they live.

Today we have a need for a new federal-state partnership. Currently we have vast inequities in college access by state. In 2019–20, eight states provided nearly 70% (68.6%) of all state need-based nationally (NASSGAP, 2021). Tuition and required fees at public four year colleges vary from over \$16,000 in New Hampshire to \$7,300 in North Carolina (De Brey et al., 2021). For students from low-income backgrounds, the odds of college attendance are shaped by the state where they live. While there is a national interest in expanding college opportunities, states have not been able to meet this challenge on their own. A new federal-state partnership can work to guarantee college affordability for all, regardless of the state where a student resides. The federal government is uniquely positioned to help to resolve some of the difficulties that states face in providing sufficient and stable funding for higher education, although states should continue to have primary responsibility for the provision of higher education.

In this brief, we consider some of the structural barriers facing state support for higher education and evaluate four recent proposals to improve affordability for students and families. We evaluate these proposals using two important principles as guideposts: (1) states should be encouraged to maintain their support for higher education, and (2) some of the structural challenges that limit state support for higher education, like counter-cyclical funding patterns and

instability, should be addressed. We begin by discussing underlying features of the higher education finance system and cost challenges faced by the sector. Then, we discuss the diversity of higher education systems and funding models across the U.S. states. Next, we consider structural barriers faced by higher education within state budgets. Finally, we evaluate four current proposals for federal-state partnerships.

## HOW HIGHER EDUCATION IS FINANCED IN THE U.S.

Cost sharing is assumed within the U.S. system of higher education with the burden for supporting higher education shared between taxpayers and the individuals who attend institutions (Johnstone & Marcucci, 2010).<sup>3</sup> Over time there have been differences in the relative burden borne by the government and individuals, but we are in a period where higher education is mostly seen as an individual benefit and costs have been structured reflecting this idea such that a greater burden has been placed on students and families. The U.S. system also assumes that there will be intergenerational transfers of wealth to attend college. Increasingly, as more parents are struggling with their own college debt and have minimal savings, the intergenerational transfer of wealth has not occurred, placing a larger burden on students to tap into hoped-for future earnings by borrowing to attend college.

## COST INCREASES OVER TIME

The cost of providing higher education has typically increased more quickly than inflation and many other goods and services (Archibald and Feldman, 2011). Whether states will be able to maintain increases in funding indefinitely is an open question, and an important structural challenge facing state support for higher education. One of the key issues for both states and the federal government is how to keep pace with the rising cost of higher education. On a per-student, inflation-adjusted basis, most states spend the same or more on higher education than they did in the 1980s, but today state spending constitutes a smaller portion of overall institutional revenues (SHEEO, 2022). Higher education is a human capital intensive sector and these cost challenges will continue.

## DIVERSITY OF HIGHER EDUCATION ACROSS STATES

Every state provides funds for its public institutions of higher education. However, there are at least 50 different approaches across 50 states. Seen through the lens of keeping college affordable for students and families, one of the primary roles of state funding is to keep tuition lower than it would be without state support. The implementation of this idea varies across states. Some states provide ample support for their public institutions and students pay low tuition. Other states provide little support, and net prices for students are high.

In this section we discuss five aspects of diversity of higher education across the U.S. states. While there are other important differences across states, we chose to focus on these five aspects since they are important for understanding how the structure of a federal-state partnership would be felt differently in varying states:

- **Institution vs. student support**
- **Differences in the use of local funding**
- **Universal vs. targeted support**
- **Infrastructure mix**
- **State effort in the level of support**

**Institution vs. Student Support.** There are two primary conceptual models for how states fund higher education. Either states support institutions in the hopes that tuition will remain low for students and families, or they use student aid to support students directly. Both models have the potential to yield affordable college options. However, there is typically little coordination between funding streams for appropriations and student aid, and in most states these funding levels are set by separate governing bodies and policymakers. In addition, there are very few policy levers to compel institutions to use state support to keep tuition low. While some states directly set tuition either through the state board or legislature, many states only have indirect mechanisms like public opinion and board appointment processes as tools to reign in tuition levels. Direct state support of institutions does not always yield low prices for students (Webber, 2017). In voucherized systems that

<sup>3</sup> Other parties are also involved, like the philanthropic sector, but not discussed in this brief to maintain a focus on the primary sources of revenue for institutions.

use student aid as a primary means for distributing state support, states use both large-scale need- and merit-based aid. With merit-aid systems, there are concerns about both access and equity since scholarships in these programs are typically awarded to more affluent students (Heller & Marin, 2002, 2004; Heller, 2004). Many states use a mix of both direct support to institutions and student financial aid with large variance in the relative proportions of each type of funding. Because the interaction of tuition levels and student aid sets the net price for students and families, it is important to consider both state general appropriations for institutions and student aid programs to understand affordability.

**Differences in the Use of Local Funding.** There is also a great deal of variance across states in the use of local funding, particularly for community colleges. Some states (like Nevada) support their community colleges entirely through state funding. Other states (like Illinois) are heavily dependent on local funding and their community college funding systems closely reflect the structure of K-12 schools that are reliant on local property taxes for support. Typically, the greater reliance on local property tax the more regressivity there is in the system. Variations in the role of local support (and if local support exists at all) are also important to consider when evaluating state effort to support higher education.

**Universal vs. Targeted Support.** There is an inherent trade-off between universal programs and targeted programs when allocating state resources for higher education. For example, low tuition benefits everyone – high, middle, and low-income families – but is not very efficient since those who could afford to pay for college are subsidized. Highly targeted need-based aid directs resources to those who need it the most, but administrative barriers, complexity, and application burdens can prevent access.

**Infrastructure Mix.** Higher education infrastructure in each state also matters. In particular, the mix between public and private institutions can shape affordability. Some states rely on their private institutions and provide either direct support to institutions (as is the case in Michigan) or support through student aid

programs that are earmarked for students attending private institutions (as is done in Massachusetts). The scope of the community college sector in each state also matters for both access and affordability. Some states (like California) have designed systems to have large community college systems that assume the ability to transfer into four-year institutions. Other states (like Vermont) have few community colleges and place little reliance on the sector as either a low-cost option or a pathway for transfer.

**State Effort in the Level of Support.** States have also followed different trajectories in their funding for higher education, with some states maintaining low appropriations for higher education and minimal student aid programs over the last half-century, while others have consistently spent more. These variations in levels of appropriations, even when adjusted per-FTE, shape the relative success, scope, and stability of the higher education sector across states.

In addition to these important differences across states in their contexts and the tools used to promote affordability, there are shared structural challenges that higher education faces in each state. These structural challenges are reviewed in the next section.

## **STRUCTURAL CHALLENGES IN U.S. HIGHER EDUCATION FUNDING**

Higher education funding faces a number of challenges that would benefit from federal intervention. We have identified five primary structural challenges to building and maintaining an effective state role for funding higher education. The first four areas can be thought of as being related problems since state funding for higher education is strongly cyclical, and enrollment surges in downturns can exacerbate shortfalls. However, we discuss each area in turn for clarity:

- **State budgeting features**
- **The strong influence of the business cycle on higher education funding**
- **Volatility of state support**
- **The countercyclical nature of funding needs**
- **The misalignment of timelines between universities and states<sup>4</sup>**

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<sup>4</sup> Prior literature has also explored the role of politics in higher education funding decisions (see for instance, McLendon et al., 2009; McLendon et al., 2005; Nicholson-Crotty & Meier, 2003). While this work is valuable, we exclude it here to maintain a focus on the structural barriers facing higher education.

Each challenge is discussed in this section to make the case for federal intervention. Traditional framing of higher education finance either ignores or undervalues the fundamental structures of the systems that provide public support for higher education. Attention to these features and their intractable nature provides a rationale for federal support of higher education.

**State Budgeting Features.** Inherent components of state budgeting put higher education at a structural disadvantage for sustained and stable funding. These state budgeting features do not reflect the value that higher education offers to states or the role that the sector plays in ensuring both a highly educated workforce and a well-functioning democracy (McMahon, 2009, 2021; McMahon & Delaney, 2021; Newfield, 2016). There are two primary features of state budgets that make higher education particularly vulnerable to cuts during economic downturns: higher education's position as a discretionary budget category and state-balanced budget requirements.

**On average, higher education represents 9.6% of total state budgets. Nationally, it is the third largest component of total state spending.**

NASBO, 2019

State spending on higher education generally falls into the discretionary part of state budgets. As more items in state budgets have become non-discretionary, due to court mandates or federal matching programs such as Medicaid, discretionary parts of state budgets have shrunk in both number of categories and the overall proportion of state spending. In most states, higher education is the largest remaining discretionary spending category. On average, higher education represents 9.6 percent of total state budgets. Nationally, it is the third largest component of total state spending (NASBO, 2019).

Balanced budget requirements are almost universal across the U.S. All states except Vermont have a balanced budget requirement and, in most years, Vermont behaves as though it is subject to this requirement. While levels of taxation are a choice made by states, this combination of higher education's role as a discretionary spending category and balanced budget rules make it almost inevitable that discretionary spending categories, and higher education in particular, will be cut during economic downturns (Gamage, 2010; Poterba, 1995). Higher education is often one of the first budget areas on the chopping block in challenging economic times (Humphreys, 2000).

**Higher Education Is Strongly Influenced by the Business Cycle.** Generally, state budgets are strongly tied to the business cycle. Mirroring this pattern, state budgeting for higher education is strongly influenced by the business cycle (Gamage, 2010; Kane et al., 2003). While there are some differences across states due to differing tax bases, in general, the pattern of cuts and increases to higher education follow the business cycle closely creating a "roller coaster ride" for higher education appropriations.

This poses challenges for institutions of higher education, especially public institutions that are dependent on state support for operations. If we consider the share of institutional budgets that are derived from state funds, there are vast differences across sectors with flagship and selective institutions typically being the least reliant on state funding. Regional, open-access, less selective institutions, and community colleges typically have a larger share of their budgets derived from state funds. This occurs both with general appropriations for operating and with student aid, since less selective institutions tend to serve students that are more reliant on state student aid. Because of differences by institution in reliance on state funds, the impacts of state budget downturns are typically felt more strongly by less selective institutions that serve students with greater financial need.

**Volatility of State Support for Higher Education.** The result of these structural features of state budgets is a very volatile funding environment for higher

education (Lacy, et al., 2017; Li, 2017; Webber, 2017). In addition, the intensity of volatility has both increased and become more widespread over time (Doyle et al., 2021; Gamage, 2010; Webber, 2017). The volatility observed in the higher education sector stands in contrast to the more stable levels of funding seen in other state budget categories such as K-12 funding. Because of these structural features, our expectation is that volatility in state support for higher education will continue unless structural features are addressed or new actors (like the federal government) provide increased support for higher education.

Operating in a volatile environment has important implications for institutional behavior, since institutions are understandably risk averse. An unpredictable environment can undermine institutions' ability to contribute to the public good (Doyle et al., 2021). With unreliable state funding, risk-averse institutions increasingly engage in activities designed to increase revenues (Slaughter & Rhoades, 2009). Institutions may also be more likely to emphasize more predictable revenue streams, like tuition, which could lead to higher tuition rates and more out-of-state enrollments (Jaquette & Curs, 2015; Cheslock & Gianneschi, 2008a). This also has the potential to shape degree and program offerings with a preference for academic programs that can guarantee a steady stream of revenue. For instance, a lucrative MBA program may be created as opposed to a revenue-neutral undergraduate program that fosters democratic norms, even though the latter program could generate much larger positive social externalities (Jaquette, 2019). Lack of knowledge about future levels of funding can make planning for staffing levels difficult, which could lead to difficulties hiring and retaining personnel (Delaney, 2016; Massy, 2016).

**Higher Education as a Balance Wheel.** We have observed a pattern that higher education plays the role of the "balance wheel" in state budgets (Delaney & Doyle, 2007, 2011, 2014, 2018; Hovey, 1999). This has made higher education funding more volatile than other state budget categories. The balance wheel pattern describes differing funding patterns at different moments of the business cycle. During prosperous

budget times, states increase higher education funding at a faster rate than other state budget categories. Conversely, during economic downturns, states cut higher education appropriations more severely and at a faster rate than other state budget categories. Evidence from prior literature indicates that the balance wheel pattern is lopsided with smaller increases during years

**Institutions may also be more likely to emphasize more predictable revenue streams, like tuition, which could lead to higher tuition rates and more out-of-state enrollments.**

**JAQUETTE & CURS, 2015,  
CHESLOCK & GIANNESCHI, 2008A**

where state budgets grew and larger cuts during periods of contraction, which has resulted in a general ratcheting down of higher education support by states (Delaney & Doyle, 2007, 2011, 2018). In addition, the length of time to recovery following a cut in state general appropriations (returning to a previous higher funding level) has been expanding. In the 1980s, recoveries were fairly certain and quick. This pattern slowed in the 1990s, and recoveries were both rare and had long time spans in the 2000s (Doyle & Delaney, forthcoming).

Because higher education has the ability to raise outside revenue, it is a politically attractive area for cuts during economic downturns. This outside revenue stream is the sector's ability to charge tuition to students and families, and is a type of revenue that does not exist for most other state budget areas. During difficult economic years, state cuts can therefore lead to large tuition increases. At the same time that students and families are generally facing economic constrictions, tuition prices are often increased thereby limiting access to college.



### **The Countercyclical Nature of Higher Education**

**Funding and Demand.** Until the COVID-19 global pandemic, enrollment patterns were also predictable in higher education and closely followed the business cycle (Nguyen et al., 2021; National Student Clearinghouse Research Center, 2022). In fact, one of the strongest predictors of enrollment levels is unemployment rates (Barr & Turner, 2013; Betts & McFarland, 1995; Humphries, 2000). For individuals one of the best options during an economic downturn, especially when facing a job loss, is to return to higher education to retrain or upskill. The result is a general pattern of increasing enrollments, especially at community colleges, during challenging economic times. This results in a countercyclical pattern whereby institutions see enrollment increases and most need funding during moments when states are most likely to cut higher education budgets. This pattern is exacerbated at community colleges since state support for this sector faces more volatility in state appropriations than four-year institutions, further amplifying these countercyclical challenges (Doyle et al., 2021).

Typically, the effects of economic downturns both draw more students into college and, due to recessionary-driven dips in incomes, allow more students to qualify for larger amounts of need-based student aid. This puts pressure on institutions to find additional resources to support growing enrollments and to increase need-based student financial aid programs. However, recessionary periods are times when typically both

appropriations to institutions and student aid programs are cut, further limiting assistance available to students. This confluence results in an environment that has the potential to degrade educational quality (Dynarski 2020; Orphan, 2020).

This countercyclical pattern is ripe for federal intervention due to the benefits that upskilling and retraining bring to the economy by speeding up economic recoveries and reducing the duration of recessions (Bipartisan Policy Center 2020; Dynarski, 2020; The Institute for College Access and Success 2019).

**Misalignment of Timelines.** University timelines are often derived from lofty institutional missions that focus on the generation, transmission, and preservation of knowledge in perpetuity for the benefit of humanity. By contrast, political and business cycles are typically short. Political cycles que off election cycles of two, four, or six years (Ballotpedia, n.d.; U.S. Senate, n.d.). Business cycles are likewise short with an average full business cycle lasting 4.7 years (Keng, 2018; NBER, 2020). Between 1854 and 2009, there were 33 business cycles in the U.S. with the average recession lasting for 1.5 years (NBER, 2020). The profound differences in the time horizons of higher education and either political or business cycles amplifies volatility for higher education institutions. While not a unique challenge since other state budgeting areas also struggle with the misalignment of timelines between their work and political and business cycles, this issue is more

pronounced for higher education given the extended time horizon of institutions and how these timelines align with their missions. For example, faculty hiring can take many years in higher education. In addition, the length of time most students are enrolled for a degree exceeds most political cycles. A federal-state partnership may not be able to fully resolve the misalignment of timelines, but adding stability to the funding streams for higher education would help institutions navigate this structural challenge.

## **THE NEED FOR INTERVENTION TO REMEDY STRUCTURAL CHALLENGES**

The ability to receive training beyond high school yields immense personal and social benefits, and there is a national interest ensuring access to higher education both across states and in all types of budgetary environments. There is also a national interest ensuring that opportunities for postsecondary education are more consistent across cohorts of students.

Higher education's position as a large discretionary spending category combined with balanced-budget constraints in the states has created a context by which higher education is strongly influenced by the business cycle. This results in immense volatility in state support for higher education. Due to its role as a balance wheel for state budgets, the sector is unlikely to achieve predictable funding if it is primarily reliant on states for support. The counter-cyclical nature of funding is exacerbated by the nature of both postsecondary enrollments and student needs. In addition, the misalignment of timelines between higher education missions, and political and business cycles further entrenches these systemic problems. Some have argued that the reason for states' struggles is simply a matter of changes in legislators' values regarding higher education (Taylor, 2022), but values play out within structures and the structures facing the higher education sector are ones that will continue ratcheting down state support. Policies that reinvigorate investment in higher education, lower prices charged to students and families, and buffers against volatility in college funding are vital to the future of our nation.

## **ANALYSIS OF TRADE-OFFS IN FEDERAL-STATE PLANS FOR COLLEGE AFFORDABILITY**

Given the challenges facing state funding, demands for federal action have only grown louder over time. Multiple solutions, most of them focused on very low or no tuition, have been proposed. Our goal in this section is to offer a typology of different possible federal-state partnerships and to discuss the trade-offs inherent in each. There's no perfect answer to the question of how to design a joint federal-state program. The goal of this analysis is instead to provide a clear picture of the winners and losers from different approaches, and to discuss the trade-offs inherent in each proposal.

**Any plan that increases affordability reduces revenues collected from students.**

Revenues at public institutions can be broadly thought of as having two sources: government and students. Government sources of support include direct subsidies to institutions that allow tuition to be lower, state student financial aid, tax programs, and federal student financial aid. Revenues from students are those students must pay on their own, most notably tuition. Tuition revenues can be paid directly from students or can come from loans that must be repaid. All of the proposed plans for increasing college affordability rely on shifting the share of costs from tuition revenues from students to the government, with different plans involving differing amounts of funding from federal and state governments.

Any plan that increases affordability reduces revenues collected from students. Plans can reduce net prices through some combination of reducing tuition or increasing student financial aid. A plan can reduce net prices for students equally or differentially depending on student characteristics. So, for instance, a need-based plan lowers net prices more for students from low-income backgrounds. A plan without any means-testing lowers prices for all students. While universal plans are



politically popular and easy to communicate as “free college for all,” these plans also share the downside of being regressive, as high-income students will benefit as much as students from low-income backgrounds, and because high-income students are more likely to attend college, the incidence of universal programs tend to direct more overall benefits to wealthier individuals.

In addition to the share of funding apportioned to students and government, the overall level of revenues collected needs to be considered. Every college affordability plan does two things: change the overall level of revenues collected, and change the revenue source. A college affordability plan could lower overall revenues by charging low or no tuition, which would decrease the amount charged to students but lower overall revenues and hinder institutions’ ability to operate (or erode educational quality). Alternatively, a college affordability plan might increase overall revenues. Every college affordability plan must then balance these two priorities – how overall revenues will be affected, and which revenue sources will be changed.

There have been policy proposals that would involve direct federal funding of institutions, without involving states as partners (Carey, 2020). We consider these proposals outside the scope of our analysis, given our focus on the relationship between states (not institutions) and the federal government when it comes to funding higher education.

In our view, there are four different frameworks for how the federal government can work with the states to lower prices charged to students:

- 1. Replace students with the federal government as a revenue source.**
- 2. Offer a flat subsidy to replace student revenues at the state level and include a mandate for free or low tuition (the basic premise of Biden’s America’s College Promise plan).**
- 3. Incentivize state student financial aid funding through a matching program.**
- 4. Incentivize state appropriations through a matching program.**

Below, we discuss each of these approaches and the likely trade-offs involved in each approach.

### **Replace Students with the Federal Government as a Revenue Source.**

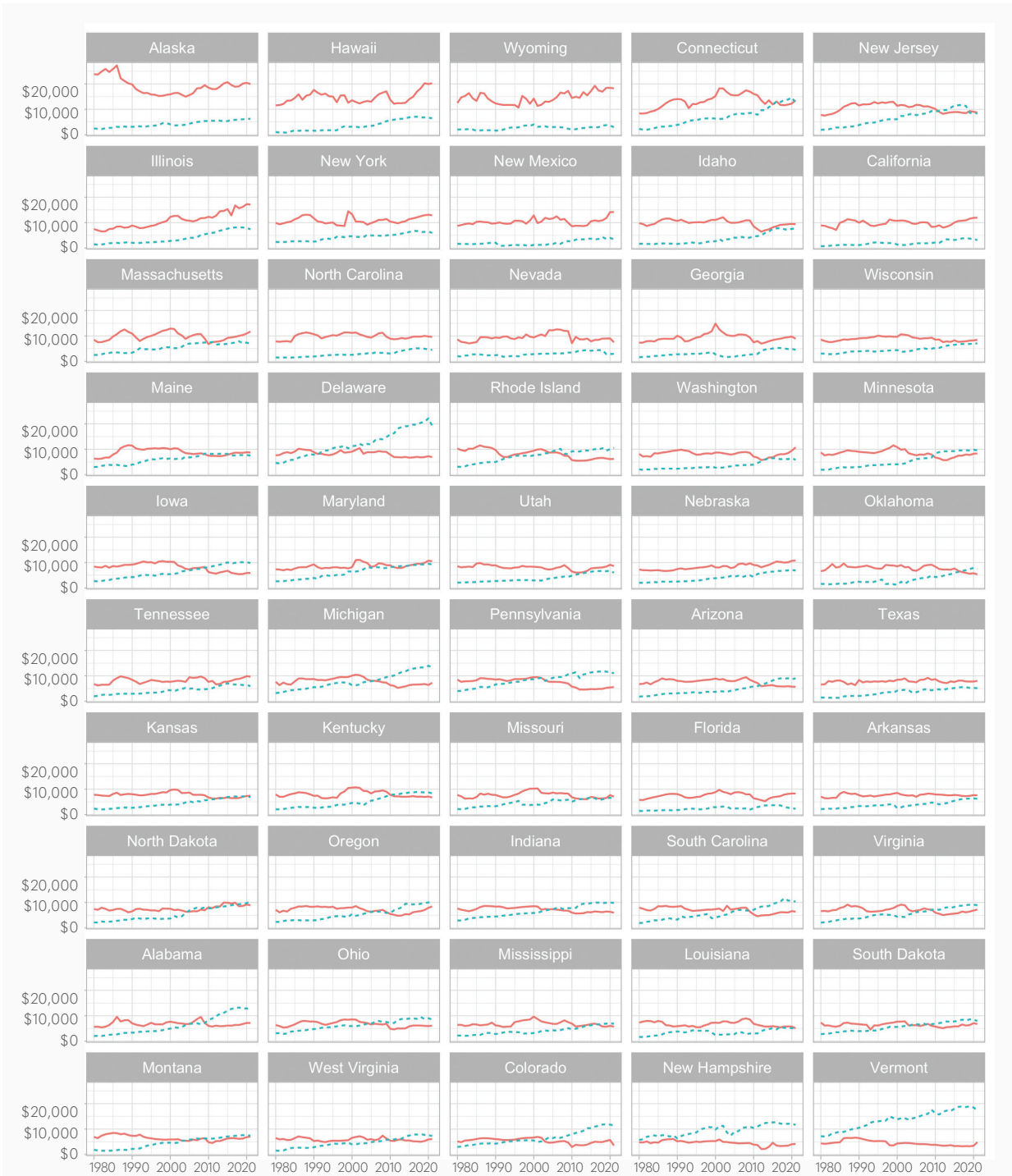
One solution that has been promoted is for the federal government to cover all or most tuition revenues for public colleges in all states. In this case, the federal government would take over some, or all, of the current role that students and families play by paying tuition. The upside to this approach is its simplicity: tuition would be free or much lower for all students in all states. In addition, overall revenues per student would remain at current levels.

Examples of this type of program took off during the Democratic primary prior to the 2020 presidential election. These proposals were later developed into proposed legislation. While the underlying structures of these plans all locked in current spending levels, there were slightly different approaches to thinking about the state role. Senator Bernie Sanders and Representative Pramila Jayapal proposed a legislative version of Sander’s campaign proposal in 2021. Under this approach, up to four years of college would become tuition free for students. States would pay 25%, and the federal government would pay 75% of the price of bringing college tuition to zero (H.R.2730 - 117th Congress, 2021). Senator Warren proposed a similar policy plan, but it has not yet been codified in a legislative proposal (Warren, 2019).

The downside to this approach is that it rewards states that have underinvested in higher education and it penalizes states that have invested heavily. As the figure below shows, Vermont spends \$7,370 per student, while collecting \$15,436 per student in tuition revenues. By contrast, New Mexico spends \$15,134 per student, while collecting \$3,685 per student in tuition revenues (SHEEO, 2022). Under this plan, the federal government would spend generously in Vermont, while providing less than a quarter of that amount to New Mexico, even though policymakers in New Mexico made extensive prior efforts to lower college prices.

**FIGURE 1:**

**Per-Student Revenues from State Appropriations and Tuition, 50 States, FY 1980-2021**



**Spending Type** — Education appropriations excluding federal stimulus — Net tuition and fee revenue

Note: Authors' calculations based on SHEEO's State Higher Education Finance, FY 2021. [bit.ly/3JhS7n2](https://bit.ly/3JhS7n2) Education Appropriations Excluding Federal Stimulus includes all state and local funds provided for both direct appropriations and student aid for each state. States with highest education appropriations revenues are listed first. Net tuition and fee revenue includes all tuition revenue collected from students. All amounts are per-FTE enrollment and inflation adjusted using the CPI-U.

Such a plan would also require a MOE provision to mandate that states maintain their level of spending at, or near, what it was prior to the introduction of the new college affordability plan. This provision would “lock in” existing differences in state funding, meaning that low-spending states such as Vermont and New Hampshire would continue spending little, while high-spending states such as New Mexico would be compelled to maintain their high levels of per-student spending.

Stability of funding would be a considerable upside to this approach, although it would come at the cost of maintaining per-FTE spending inequality across the states. Given states’ historic unwillingness to raise revenues during recessions, such a plan would also most likely need to include a “safe harbor” provision under which the federal government would step in if states face an economic downturn that would make it difficult to maintain previous levels of funding.

The other key question for such plans is how they might expect both federal and state funding to increase over time. It is well documented that increases in higher education costs exceed the inflation rate over time, and any plan that involves a MOE provision must also account for how costs rise over time (Archibald & Feldman, 2021).

**Offer a Flat Subsidy to Replace Student Revenues at the State Level, with a Mandate for Free or Low Tuition.** In contrast to the above approach, the federal government could attempt to lower tuition by offering states a flat, per-student subsidy, with the requirement that the state then offer free or very low tuition at public colleges. This is the basic framework used in the America’s College Promise Act. Proposed in 2021 by President Biden, America’s College Promise would have established free community college nationwide using federal funds and a phased-in state match that would top out at 20% after five years. For instance, the federal government might offer \$7,000 (about the national average of per-student tuition revenues) for every student enrolled at public colleges in a given state. If the state accepts the offer, they would substitute the amount of federal funds for collected tuition revenues. In some states, the flat amount offered by the federal government might exceed

existing per-student tuition revenues, while in other states it might be considerably less than the amount already collected in tuition. In California, a plan like this would increase tuition revenues by \$4,500, while in Michigan it would decrease tuition revenues by nearly \$8,000 (SHEEO, 2022).

**The upside to this approach is that all states are treated equally: no state receives more, or less, money based on past histories of funding.**

The upside to this approach is that all states are treated equally: no state receives more, or less, money based on past histories of funding. The key downside to this approach is the likelihood that the states with highest tuition revenues would be the least likely to participate, meaning that students in the most expensive states might not benefit from this proposal. The plan could be made generous enough that all but the states with the most expensive tuitions would benefit from participating, and it’s likely that this would be necessary in order to ensure a high proportion of enrolled students benefit.

A key question for this type of plan, similar to the “full coverage” plan described above, is how MOE and change over time in state funding would be handled.

**Incentivize State Financial Aid Funding.** Many plans to improve college affordability involve some form of matching funds between federal and state governments. The common theme with these plans is that the federal government will provide additional funding in response to state efforts, typically either state spending for financial aid or appropriations. Some plans combine both financial aid and appropriations.

Most states have some form of student financial aid, either need-based or merit-based. The federal government could provide matching funds to states based on states’ spending on financial aid. For instance,

the federal government could offer to spend four dollars for every dollar that states spend on student financial aid. State plans could vary, but might be broadly based on family income—for instance, eligibility might be limited only to those whose families make less than \$100,000 per year, or the state could use a methodology similar to the federal methodology for need-based aid (Doyle, 2013).

The benefit of this approach is its flexibility. Instead of offering an “all-or-nothing” deal, this approach would reward states for their existing efforts to reduce the amount charged to students, without penalizing states. The downside to this approach is that states may still be reluctant to participate, even at relatively generous terms from the federal government.

Examples of this type of program can be found in proposed legislation from U.S. Senators Reed and Collins along with a proposal from the Bipartisan Policy Center (Aborn & Akabas, 2022; Reed & Collins, 2021, S.2054, 2021). It could also be done through a reinvigoration of the LEAP program, as proposed by Carey and Palmer (2021). While all of these proposals contain additional elements, we discuss only the federal match of student aid dollars here for conceptual clarity.

As with appropriations, states differ tremendously in their commitment to financial aid in general and need-based aid in particular. In New York, the state provides about \$1,600 per student in need-based funding, while South Dakota provides \$7 per student (NASSGAP, 2021). While both states would benefit equally from an incentive-based program, students in New York would clearly continue to be more generously funded from the state’s existing programs. The goal of these plans would be to incentivize more student-aid funding from low-spending states such as South Dakota, hopefully closing this gap.

The other key issue with this approach would be the implementation challenge of creating rules that would allow sufficient state flexibility in designing financial aid systems while still maintaining a need-based element. States have different enrollment infrastructures which may entail different designs for financial aid programs.

For instance, some states with high levels of enrollment in private institutions might want to include funding for attendance at private colleges. As the example of Medicaid shows, striking a balance between flexibility and ensuring that the goals of the program are met is a difficult challenge. Another downside to this plan is the difficulty that states and institutions have in planning for the number of students that would be eligible for and apply for their financial aid programs.

This plan would have substantial benefits in combating volatility in funding, as students applying for need-based aid would drive funding, and states with more students meeting their criteria would receive bigger increases in federal funding. This design would require the federal funding for this program functioned as a quasi-entitlement like the Pell Grant. Mechanisms to combat countercyclical funding are an important element of this type of program.

In the past, programs such as LEAP provided a modest level of federal matching to student financial aid programs. It’s likely that these related programs helped to drive the growth of state student financial aid in the 1970s and 1980s. This approach builds on the proven track record of a prior federal-state matching program (Reed & Collins, 2021).

**Incentivize State Appropriations.** The federal government could also create a matching program for state appropriations. This could be in addition to or instead of a matching program for state student financial aid. A recent example was presented by the Bipartisan Policy Center. In their model, a program would provide matching funding on a four-to-one basis for any new spending (above recent averages) from the state (Aborn & Akabas, 2022).

This proposal could have many benefits, chief among them is its “rainy-day” provision, which could help smooth out funding for institutions over time by providing countercyclical funding. This provision would require that states take some of the federal money and place it in a fund, which could be used during a downturn. Spending these rainy-day funds during a recession would count as new funding under

the provisions of this plan and would be matched by federal spending. Such a program would differ from a MOE provision. Instead of locking in current funding levels, this proposal would reward states that did more to fund their system of higher education throughout the business cycle.

As examples of states that have been on very different paths, we can compare California and Louisiana. Between fiscal year 2011 and fiscal year 2021, California increased per-student spending from about \$9,000 to about \$12,000, a 30% increase over the decade. In Louisiana, by contrast, funding went from \$6,500 to \$5,000 per student, a 23 percent decrease in the same decade (SHEEO 2022). Under the provisions of this plan, students in California would have gained an additional \$12,000, easily enough to cover tuition revenues, while students in Louisiana would not have received any additional funding. Of course, under the provisions of this plan, policymakers in Louisiana would have had much more incentive to adequately fund their colleges and universities.

From the perspective of college affordability, the key question for an appropriations matching program would be whether it would sufficiently lower tuition. Research by Webber and others has shown that changes in state appropriations do not translate one-to-one into tuition decreases, but instead for every \$1,000 increase in state support for an institution of higher education, tuition decreases on average by \$318 (Webber, 2017). To ensure that such a plan would result in substantially reduced tuition, it would need to be fairly generous.

## SUMMARY: ADDRESSING TRADE-OFFS

The table below summarizes the key features of each type of federal-state partnership, across a number of dimensions. Below, we summarize what we view as the key trade-offs inherent in each program.

In the first column of the table, we list the basics of each program design. In the subsequent columns, we list features of each plan, including the extent to which tuition revenues are replaced by federal spending, overall revenue change likely induced by the plan,

differences across states in the amount that the federal government would spend, and how the plan addresses stability of funding over time. Below, we summarize the findings from our comparison.

- **Replacing students with the federal government as a revenue source (Sanders Proposal)** would result in unequal funding across states. The largest amounts of funding would go to states with the highest tuition, while states with low tuition would receive the least. By guaranteeing free or low tuition, this plan would unambiguously lower prices for students.
- **Offering a flat subsidy (America's College Promise)** would offer all states the same amount of federal funding to reduce tuition to provide free community college (and in some proposals offer free college at four-year institutions). With the flat rate, it is unclear how many states might participate. It is also not clear how much federal funding is enough to get a sufficient number of states to participate.
- **Matching financial aid spending (Reed & Collins PASS Act)** would function a lot like the SSIG/LEAP by offering matching funds for need-based aid. The program would be a net benefit for students, but institutions would not necessarily benefit depending on their enrollment mix, as a consumer-driven system might drive students into one sector or to one geographic area of a state. While offering targeted aid should increase the efficiency of the program, depending on state actions, such a plan could also lack the clear messaging of a "free college for all" plan.
- **Matching appropriations (Bipartisan Policy Center)** would match new state spending that supports institutions 4:1. This proposal would offer a net benefit for institutions, but students would not directly receive all of the new appropriations, and their benefits would depend on institutional pass-through rates, which have been estimated to reduce tuition by only about a third of the amount of new spending. Rainy-day provisions in these plans could substantially enhance stability of funding over time by providing countercyclical funding.

**TABLE 1:**

**Key Features of Each Federal-State Partnership**

Plan	Example	Tuition funds replaced by government	Overall revenue change	How different is federal money going to states?	Stability of Funding Element?
Replace students with the federal government as a revenue source, with a mandate for free tuition	Sanders Proposal	All tuition funds are replaced by the federal government.	Locks in current revenues. No provision for inflationary cost increases.	Large differences in amount spent on states.	Maintenance of effort with safe harbor provision.
Offer a flat subsidy to replace student revenues at the state level, with a mandate for free or low tuition	America’s College Promise	Depends on the state. High tuition states will not have all tuition revenue replaced.	Depends on the state. Some states will see a decrease in overall revenues.	All states are offered the same amount, the actual amount received depends on state participation.	Maintenance of effort with safe harbor provision.
Incentivize state financial aid funding	Reed & Collins: PASS (Partnerships for Affordability and Student Success) Act	Depends on state efforts to increase financial aid.	Could result in increased revenues depending on enrollment levels for low-income students.	States could all receive the same amount. However, it is likely that some states will receive more funding than others.	Maintenance of effort provision.
Incentivize State Appropriations	Bipartisan Policy Center: A Moderate Alternative to Free College	No direct mechanism for replacing tuition funds. It would depend on institutional “pass-through” rates.	Could result in increased revenues for institutions, subject to an efficiency provision.	Resources distributed on a per-capita basis. States with lower GDP per capita would receive a larger share of resources.	Creates a rainy-day fund, and rewards states when they save and then spend.



## CONCLUSION

We have outlined structural challenges facing state support for higher education and provided an analysis of current proposals for federal-state partnerships. This has highlighted important differences in program design for both affordability and sustainability. Because there are structural challenges inherent within state budgets, states, on their own, will not be able to provide needed support for higher education to meet national goals. It is only through federal partnership that some of the structural challenges can be addressed. Federal funds can help temper the relationship between state support for higher education and the business cycle. Including countercyclical funding mechanisms will help to ensure college access and will increase the predictability of support for higher education.

Our work has led to two important principles to follow when designing a federal-state partnership:

1. Any plan should ensure that states cannot respond to federal spending by lowering their own spending.

A plan should have a MOE provision or built-in incentives for states to increase support for higher education. This will ensure that the partnership will not become a pass-through and will provide real support to sustain or grow investments in higher education.

2. The federal role in a partnership should be designed to address some of the structural challenges that limit state support for higher education, especially countercyclical funding and stability.

States acting by themselves will not be able to solve college affordability problems. A federal-state partnership is needed to attain substantially lower college prices for the next generation of students. Past federal-state partnerships—either through long-standing programs like LEAP or short-term stimulus funding—have been successful in providing access to students and supporting institutions. It is time to reinvigorate or create a new federal-state partnership for higher education.

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# 03

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## Creating a Federal-State Partnership to Guarantee Affordability for Students through Free College

BY: KELLY ROSINGER

Postsecondary education has long been considered an engine of upward mobility that provides a pathway to a secure economic future for children from middle- and lower-income families. Public colleges and universities play a particularly important role in this pathway by guaranteeing an affordable and accessible postsecondary education. Nearly three out of four undergraduates in the United States are enrolled in a public institution (de Brey et al., 2021). These institutions, especially community colleges, less selective and regional comprehensive universities, and minority-serving institutions (MSIs), also enroll large numbers of students from racially minoritized, lower-income, and other underserved backgrounds.



But elected representatives have failed to fully invest in public colleges and universities and the students who attend them. State funding per student for public higher education institutions has fallen over time. While recessions have generally contributed to declining state commitments to public higher education, funding has not rebounded to pre-recession levels in most states (Laderman & Kunkle, 2022; Mitchell et al., 2019; Rosinger et al., 2022). Nationally, 10 years after the Great Recession, states allocated \$6.6 billion less in inflation-adjusted dollars to public colleges and universities (Mitchell et al., 2019). These trends exist alongside historical underfunding of community colleges and MSIs relative to four-year and primarily white institutions (Cunningham et al., 2014; Harris, 2021). Public institutions that serve higher shares of racially minoritized students have lower levels of total revenue on average (TICAS, 2019). As state support wanes, colleges have increasingly turned to tuition as a revenue source: tuition is 1.65 times higher at public community colleges and 2.58 times higher at public four-year colleges than it was in the early 1990s (Ma & Pender, 2021).

**Nationally, 10 years after the Great Recession, states allocated \$6.6 billion less in inflation-adjusted dollars to public colleges and universities.**

**MITCHELL ET AL., 2019**

Students are left to shoulder a growing share of the cost of college, increasingly relying on student loans to pay for college, or not enrolling at all (Mitchell et al., 2019). Outstanding student debt stands at \$1.59 trillion (Federal Reserve Bank of New York, 2022). And students often struggle to repay their student loans, particularly if they did not complete a degree (Trends in Student Aid, 2016). Black students, in particular, face high levels of student debt and substantial barriers to

repayment (Houle & Addo, 2019; Scott-Clayton, 2018). Public policies that have supported home ownership and college attendance for white families have also simultaneously denied those same opportunities to Black families, preventing Black families from accumulating and passing along wealth to their children the same way white families have (Rothstein, 2017; Watts, 2020).

Declines in state support, increases in tuition, and growing reliance on student loans have resulted in a shattered guarantee: college is simply unaffordable for many students. A federal-state partnership establishing a free college program could build an affordability guarantee for all students who want to pursue higher education, regardless of their background. This report outlines the growth in free college programs at the local and state levels and summarizes the evidence of their impacts on students. It then provides an overview of variations in the design of a free college program that are likely to impact the program's outcomes. Finally, it offers policy recommendations for designing an equitable and effective free college program at the federal level.

## **THE GROWTH OF FREE COLLEGE PROGRAMS AND THEIR IMPACTS**

In recent decades, a proliferation of free college, sometimes called "promise," programs have emerged across the country that promote college affordability by guaranteeing tuition-free postsecondary education for eligible students. Many free college programs are local, place-based programs established by nonprofit foundations, corporations, local communities, or colleges themselves to improve college access and affordability and build a college-going culture in the community (Miller-Adams, 2021). States have also enacted free college programs, often as part of college completion initiatives and workforce development goals (Millett et al., 2020).

The result is a patchwork of programs where place determines whether and the extent to which students receive an affordability guarantee. In recent years, free college discussions have also moved into federal policy discourse. In 2015, the Obama administration

announced a proposal for America's College Promise (ACP) to establish two years of tuition-free college for eligible students (The White House, 2015). The 2020 presidential election saw several Democratic presidential candidates include free college as a campaign promise. In 2021, Congress considered the Build Back Better Act, a substantial federal investment in childcare, healthcare, climate action, and the economy. The initial legislation included a proposal for ACP, which would have created a federal-state partnership to establish tuition-free community college and boost state investments in public colleges and universities. ACP was one of the first pieces cut from the bill (Nadworny, 2021) before the entire legislation stalled.

Today is a critical moment for establishing a nationwide affordability guarantee for all future college students. The Biden administration in 2022 took one step toward redressing college affordability by canceling up to \$10,000 (and \$20,000 for Pell Grant recipients) in student debt for eligible individuals through executive order (The White House, 2022). But loan cancellation does not provide an affordability guarantee for the long term: future college students are not included in the plan. In addition, the COVID-19 pandemic and the associated economic decline, which have both disproportionately affected racially minoritized and lower-income families (National Center for Immunization and Respiratory Diseases, 2020; Parolin & Wimer, 2020), has made college affordability even more salient for policy action in the coming years.

Researchers have examined the impact of free college programs in a variety of contexts given the number of programs that now exist. This work offers promising evidence that free college programs, at least in some contexts, can lead to increases in students' expectations of educational attainment (Odle, 2022), college enrollment at eligible institutions (Bartik et al., 2021; Bell, 2021a; Gándara & Li, 2020; Gurantz, 2020; Page et al., 2019), transfer to a four-year college (Bell, 2021b; Bell & Gándara, 2021), and degree attainment (Bartik et al., 2021; Bell & Gándara, 2021), while also potentially reducing student debt loads (Odle et al., 2021). Some of these impacts are particularly large for lower-income, racially minoritized,

or other underserved students (e.g., Bell & Gándara, 2021; Gándara & Li, 2020; Odle, 2022), indicating free college programs could be a lever to reduce educational inequities. However, other research has found that certain design features of free college programs may exacerbate inequities: for instance, free college programs with academic requirements and more generous awards had larger enrollment effects among advantaged students (Gándara & Li, 2020).

Free college programs vary substantially across states and localities in design (Burkander et al., 2019; Gándara & Li, 2020; Miller-Adams & McMullen, 2022; Perna & Leigh, 2018; Rosinger et al., 2021), perhaps contributing to the different outcomes identified in prior research. These variations in how free college programs are designed—for instance, differences in the costs that are covered and the conditions under which students can receive aid—have implications for the extent to which programs equitably and effectively promote educational attainment. The following section describes some of the considerations and trade-offs involved in designing a free college program at the federal level.

## **CONSIDERATIONS AND TRADE-OFFS IN DESIGNING A FEDERAL FREE COLLEGE PROGRAM**

Free college programs differ in the extent to which they address affordability concerns and the extent to which eligible students can access aid. These affordability and accessibility design decisions are likely to shape the pathways the program opens and for whom and under what conditions these pathways are opened.

### **Designing an affordability guarantee**

Free college programs are intended to send a clear and simple message to students: that college is affordable (Perna & Smith, 2020). However, existing programs differ substantially in what costs they cover and how they cover these costs. How policymakers design free college programs have implications for the extent to which these programs actually make college affordable, particularly for students from underserved backgrounds (Jones et al., 2014; Miller-Adams, 2021).

- **Tuition and fees vs. cost of attendance**

Most statewide free college programs cover the cost of tuition (and sometimes fees) for eligible students (Burkander et al., 2019). For this reason, free college programs are sometimes referred to as tuition-free, indicating students will incur other costs associated with enrollment. The ACP proposal at the federal level similarly focuses on covering tuition and fees. But tuition and fees are just a portion of what students pay to attend college. Students must also pay for books and supplies, housing, food, transportation, and other living costs (Goldrick-Rab, 2016). Students may also reduce the number of hours they work in order to attend class and focus on their studies, which means they have less income available to pay these expenses. Non-tuition costs account for more than half of the cost of attendance at public colleges and universities (Goldrick-Rab, 2016). Without funds to help cover the full cost of attendance, college enrollment will remain unaffordable for many students, and free college programs will fail to create an affordability guarantee.

- **First dollar vs. last dollar**

Free college programs also vary in how the aid award is structured alongside other federal or state aid a student receives. Most statewide free college programs provide last-dollar aid to eligible students—meaning free college funds are applied to tuition and fee costs after other aid is applied. Because the Pell Grant and state grants may be sufficient to cover tuition and fees (especially at community colleges) for the lowest-income students who receive the maximum Pell award, the neediest students may receive no or very little aid from free college programs (Miller-Adams & McMullen, 2022). Rather, middle- and higher-income students are the primary beneficiaries of last-dollar awards (Billings, 2018). Meanwhile, students from low-income backgrounds are left to cover the remaining cost of attendance. In contrast, first-dollar programs award aid to students before other federal or state grants are applied. Since many federal and state aid programs can be applied toward the full cost of attendance rather than tuition and fees alone, students can receive free college aid in addition to other sources of aid, to meet financial need up to the full cost of attendance. For instance,

New York’s Excelsior Scholarship is a last-dollar program that provides funds to cover tuition costs for eligible students after other aid is applied (Scott-Clayton et al., 2022). The New Mexico Opportunity Scholarship, enacted in 2022, also operates as a last-dollar program but can be used to cover tuition as well as required fees (New Mexico Higher Education Department, n.d.). One of the benefits of the ACP plan was that it would have covered tuition and fees at community colleges on a first-dollar basis, allowing Pell Grant recipients to use those funds for other educational expenses (The Education Trust, 2021).

**In deciding what costs to cover and how to award free college aid alongside other aid, policymakers face trade-offs between offering smaller awards to a larger pool of students versus offering larger awards to a smaller, more targeted group of students.**

**Trade-offs in designing an affordability guarantee:**

In deciding what costs to cover and how to award free college aid alongside other aid, policymakers face trade-offs between offering smaller awards to a larger pool of students versus offering larger awards to a smaller, more targeted group of students. Covering only tuition and fees and awarding last-dollar aid would require fewer resources for each eligible student and could allow the program to be more sustainable and potentially extended to a larger number of students. Not surprisingly then, last-dollar, free college programs are far more common than first-dollar programs (Burkander et al., 2019; Miller-Adams & McMullen, 2022). But many students, especially lower-income students, would still find college unaffordable without funds to support non-tuition educational expenses

(Goldrick-Rab, 2016; Jones et al., 2014). As a result, programs that cover only tuition and fees, rather than meeting financial need to cover the full cost of attendance, could be limited in the extent to which they improve college enrollment and reduce inequities. On the other hand, programs that cover financial needs up to the full cost of attendance and award first-dollar aid are likely to be more expensive to operate, perhaps a reason very few free college programs do this (Billings, 2018). To maintain costs, states may seek to limit the number of students who receive the award. As a result, these aid programs are better able to address college affordability concerns but absent substantial investments by states and the federal government, fewer students may benefit from the program.

### **Designing an accessibility guarantee**

In addition to differences in the extent to which they address affordability concerns, existing free college programs also vary in which students are eligible for an award and under what conditions they can receive (and maintain) aid. Free college programs frequently place restrictions on who is eligible to receive funding and create a process applicants must follow to apply for (and maintain) an award. These design decisions have important implications for the extent to which aid is accessible to college students.

### **Eligibility restrictions**

Eligibility restrictions determine which students are able to receive aid and vary substantially across existing free college programs (Burkander et al., 2019; Everett et al., in progress; Miller-Adams & McMullen, 2022; Perna & Leigh, 2022; Rosinger et al., 2021). For instance, programs may include:

- **Financial need and/or academic requirements:** Some states restrict free college aid to students with financial need, often using family income or information on a family's expected family contribution from FAFSA to set eligibility thresholds. Similarly, states may set academic thresholds for eligibility, using high school GPA and/or standardized test scores to determine who is eligible to receive aid. Oklahoma's Promise, a program first established in the 1990s, requires students to have

a 2.5 high school GPA and is available to students whose family's adjusted gross income is below a specified amount. The Oregon Promise, enacted in 2015, requires a 2.0 high school GPA, and the state specifies that a student's expected family contribution may be used to determine eligibility. Students with family incomes below \$125,000 are eligible for New York's Excelsior Scholarship program, another more recent state free college program, without needing to meet specified high school academic thresholds. The Tennessee Promise and Reconnect programs do not have academic thresholds for initial receipt or specified income requirements (Rosinger et al., 2021b).

- **Residency and citizenship requirements:** Existing free college programs at the state level all include a residency requirement for eligibility (Rosinger et al., 2021). Local free college programs are also place-based, meaning students typically need to reside in a particular county or attend a particular high school to receive aid (Miller-Adams, 2015). Where residency requirements vary in existing state free college programs is the length of time students must be residents to qualify. In some states, residency can be established after one year or less. Other times, free college programs require students to live in the state for two or more years. As an example, Indiana's decades-old 21st Century Scholars program requires residency for enrollment in the program in 7th or 8th grade and when receiving scholarship funds. Programs may require students to be U.S. citizens or eligible non-citizens, preventing undocumented students from receiving aid, or may extend aid to students regardless of their citizenship status. Undocumented students are not eligible for the Tennessee Promise, for example, while the Delaware Student Excellence Equals Degree (SEED) program is available to undocumented students (Rosinger et al., 2021b).
- **Code of conduct requirements:** To be eligible for free college, state programs may require that students adhere to a specified code of conduct, that they do not have a criminal history, that they are not currently incarcerated, or that they successfully





pass a drug test. While these requirements vary in the extent to which they impose a particular code of conduct on students, they each impose some type of conduct restrictions. Individuals who are currently incarcerated are not eligible for the Tennessee Promise or Reconnect programs (Everett et al., in progress), for example, while the New Mexico Opportunity Scholarship extends eligibility to students who are incarcerated (New Mexico Higher Education Department, n.d.).

- **Enrollment timing requirements:** Free college programs may primarily target recent high school graduates, requiring students to enroll in college immediately or shortly after high school graduation. In Tennessee, which operates two free college programs, the Tennessee Promise is restricted to students who enroll shortly after high school graduation while the Tennessee Reconnect, which focuses on adult students, does not include this same restriction (Rosinger et al., 2021b). Programs may also require full-time and/or continuous college enrollment, restricting part-time students or students who need to pause their studies from receiving aid.
- **Enrollment requirements in specific institutions, degree programs, or fields of study:** Free college programs frequently place restrictions on the institutions (public community colleges or four-year

colleges) and/or the degree programs (associate's vs. bachelor's degree) for which funds can be used (Rosinger et al., 2021). To date, most state free college programs focus on providing aid to cover tuition at community colleges and/or associate's degree programs at eligible institutions, which may include four-year colleges that offer associate's degrees (Burkander et al., 2019). A smaller number of states also place restrictions on the fields of study that recipients of free college funds can pursue, often seeking to align state aid with workforce needs in health, science, technology, engineering, or mathematics or other high-demand fields (Rosinger et al., 2021). Indiana's Workforce Ready Grant, the Work Ready Kentucky Scholarship, and the West Virginia Invests programs each emphasize training in high-demand fields and restrict eligibility to students studying in those fields (Rosinger et al., 2021b).

### **Application requirements**

Similar to eligibility requirements, students also face different application requirements across states when it comes to applying for aid (Burkander et al., 2019; Everett et al., in progress; Miller-Adams & McMullen, 2022; Perna & Leigh, 2022; Rosinger et al., 2021). These requirements can include:

- **Enrollment or pledge prior to application:** States may require students to sign a pledge or enroll in a program prior to submitting a program application.

To be eligible for Indiana's 21st Century Scholars program, 7th or 8th grade students must pledge to meet certain academic requirements, not use illegal drugs or alcohol, or commit a crime or delinquent act (Indiana Commission for Higher Education, n.d.).

- **FAFSA vs. additional program application:** Some free college programs rely on FAFSA while others have a specific program application that students need to complete, sometimes annually, to be considered for the award (Rosinger et al., 2021). Hawaii's Promise, the New Jersey Community College Opportunity Grant, and the Maryland Community College Promise programs, for example, all rely on FAFSA (or an alternate state aid application) as the application for the state free college program. Other states, such as Tennessee and Mississippi, require a specific program application, sometimes but not always in addition to FAFSA (Rosinger et al., 2021b).
- **Meeting deadlines:** States often require students to submit FAFSA or a program application and other materials by a specified deadline. For instance, the Tennessee Promise program application is due December 1 and the FAFSA is due March 1. Some states, such as Delaware and Oregon, list a priority deadline for their free college programs, indicating students who submit an application by that deadline will receive prioritization for funding.
- **Income, GPA, or transcript verification:** To document financial need, programs may require that students submit information to verify their family income. Such requests are separate and on top of any requests that students receive to verify information on the FAFSA from their college. To verify that students have met specified academic requirements, such as GPA or coursework, students or their high schools may need to submit transcripts or other documentation. Mississippi's Higher Education Legislative Plan for Needy Students program requires new applicants to submit two forms of residency documents, a household income verification worksheet, and verification of high school curriculum from a high school counselor (Mississippi Office of Student Financial Aid, 2022).

### **Requirements for continued receipt**

Once enrolled in college, there are additional requirements students must comply with in order to maintain their award (Burkander et al., 2019; Everett et al., in progress; Miller-Adams & McMullen, 2022; Perna & Leigh, 2022; Rosinger et al., 2021), which can include:

- **Annual application submission:** Students may be required to submit a program application annually to be eligible to continue receiving aid. This may involve submitting additional materials to verify income or other eligibility requirements. Tennessee and Mississippi, for example, both require students to submit a program application annually for continued receipt of the scholarship (Rosinger et al., 2021b).
- **Full-time and/or college enrollment requirements:** Similar to initial eligibility requirements, students may be required to maintain continuous and/or full-time enrollment in college and may lose access to funds if they change to part-time status or take an unapproved pause from their studies. For example, Rhode Island Promise and Delaware SEED recipients are required to maintain continuous, full-time college enrollment to maintain eligibility for the programs (Community College of Rhode Island, 2021; Rosinger et al., 2021b).
- **Academic requirements:** Once in college, free college programs may require that students maintain a certain GPA (beyond the GPA requirement to maintain satisfactory academic progress at the institution) to remain eligible for an award. Rhode Island Promise recipients, for instance, must maintain a 2.5 GPA in college to maintain the scholarship (Community College of Rhode Island, 2021), which is higher than the GPA requirement for maintaining the federal Pell Grant.
- **Volunteer requirements:** To maintain aid eligibility, programs may require students to complete volunteer service and submit related documentation. The Tennessee Promise and Nevada Promise both require recipients to conduct community service and complete a form documenting the service (Nevada System of Higher Education, 2022; Tennessee Higher Education Commission, 2022).

- **Limits on the number of semesters award covers:**

To encourage students to complete a degree in a timely manner, programs may limit the number of semesters or years a student is eligible to receive an award. This may make it difficult for part-time students or students who pause their studies to maintain aid. Students can receive the Maryland Community College Promise Scholarship and Nevada Promise for up to three years while students can receive the Tennessee Promise for up to five semesters (Maryland Higher Education Commission, n.d.; Nevada System of Higher Education, 2022; Tennessee Higher Education Commission, 2022).

## **TRADE-OFFS IN DESIGNING AN ACCESSIBLE GUARANTEE:**

Eligibility restrictions and requirements for receiving aid help states allocate public funds toward various state aims, such as increasing college enrollment and completion, reducing educational inequities, and meeting workforce development goals. In doing so, both students and the state may benefit from investments in guaranteeing affordability: for instance, field of study restrictions may help graduates obtain employment and earn higher wages in high-demand fields while also helping states meet workforce development goals.

But choices regarding eligibility restrictions and the process of applying for (and maintaining) aid have implications for who is eligible for aid and whether students are able to access aid for which they are eligible. Eligibility restrictions are tools that policymakers use to target public funds toward populations deemed *deserving* of aid. There are a number of ways policymakers construct the populations they deem deserving of aid: restricting eligibility to students who meet some threshold of need or academic merit, who are residents of the state and citizens of the United States, who have upheld a certain code of conduct, who enroll full time and continuously in college after high school, or who are studying at particular institutions or fields of study. Many of these restrictions, however, tend to favor relatively advantaged students. As a result, the ways policymakers construct deserving populations can

have material consequences for already underserved students, serving to potentially widen racial and economic inequities in educational outcomes.

In targeting aid, policymakers sometimes design programs such that the receipt of aid implies a reciprocal agreement between the state and student. This idea of reciprocity relates to the idea of deservingness in that it requires students to do something above and beyond attending college in return for receiving aid. Volunteer requirements, requirements to live in the state after graduation, or requirements to maintain a specified college GPA are examples of program requirements that require reciprocity on the part of the student in order to be eligible for aid. While some of these design features, such as GPA requirements may be favored by voters and the public (Bell, 2020), they can also reinforce inequities by adding additional requirements for recipients.

**Eligibility restrictions and requirements for receiving aid help states allocate public funds toward various state aims, such as increasing college enrollment and completion, reducing educational inequities, and meeting workforce development goals.**

Restricting eligibility and requiring reciprocity from students in return for aid beyond attending college can help target resources to students who are most in need or most likely to persist and graduate but can also put up barriers preventing eligible students from receiving aid. These requirements and restrictions, in addition to other requirements for applying for and maintaining aid, create administrative burdens, or frictions in

how eligible individuals experience their interactions with government programs (Herd & Moynihan, 2019). Administrative burdens—created by extensive documentation, deadlines, meetings, volunteer hours, and other requirements—introduce a complex process that students must successfully navigate in order to receive aid. They can prevent eligible individuals from receiving public services and disproportionately fall on racially minoritized and lower-income individuals, serving to reproduce existing inequities (Herd & Moynihan, 2019; Ray et al., 2022).

Simpler and more transparent aid programs—presumably those with fewer administrative burdens—have been shown to increase enrollment while complex financial aid processes prevent many eligible students from receiving aid (Dynarski et al., 2021). As a result, aid programs that are simple and easier to navigate are likely to be more effective at reaching their target populations than aid programs that are more complex and require students to navigate a number of requirements. Research has shown that FAFSA alone is complex and can prevent eligible students from applying for aid (Dynarski & Scott-Clayton, 2006), and FAFSA is only one part of many existing state free college programs. The complex maze of eligibility restrictions, application requirements, and requirements for continued receipt that exist in many free college programs may limit the extent to which the programs are accessible, even for otherwise eligible students. To be clear, some of these design choices are likely intentional: complexity in eligibility requirements allows policymakers to narrowly target financial aid to a smaller group of students, such as students with the most financial need. However, this complexity can also make programs less accessible to the very students they aim to support.

## **POLICY RECOMMENDATIONS FOR DESIGNING AN AFFORDABILITY GUARANTEE**

Concerns about student debt and college affordability are in part the result of sustained policy choices to decrease commitments to funding higher education at the state level and limited interventions to halt these declines at the federal level. Federal policy discussions

in recent years have resulted in a renewed focus on the potential role of the federal government in public higher education. ACP, a proposal to build a federal-state partnership that guarantees college affordability for all students, regardless of their backgrounds, was removed from legislation that later stalled in Congress in 2022. The Biden administration has since used executive action to offer student loan relief for eligible individuals. The move is a step toward addressing a broken guarantee for millions of former college students around the country. But future college students face the same policy environment that got us to this point in the first place: decreasing state support, rising tuition levels, and growing reliance on student debt. Given that policy decisions created a shattered affordability guarantee, policy choices can also be used to cement a robust and sustainable affordability guarantee.

**Simpler and more transparent aid programs—presumably those with fewer administrative burdens—have been shown to increase enrollment while complex financial aid processes prevent many eligible students from receiving aid.**

**DYNARSKI ET AL., 2021**

In doing so, however, policymakers must be attuned to how free college program design determines what postsecondary pathways are opened, to whom postsecondary education pathways are opened, and under what conditions these pathways remain open. These decisions influence the extent to which college is actually *affordable* and the extent to which a program is *accessible* to eligible students. The choices policymakers make regarding how to design a free

college program have implications for how equitable and effective the program will be. The outcomes of any federal-state partnership focused on affordability will hinge on these policy choices. This section highlights promising design features that center affordability and accessibility as federal policymakers consider free college proposals.

### **Promising design features for affordability**

- **Bring states back to the table to fund public colleges and universities**

Waning state support for public colleges and universities has contributed in large part to the broken college affordability guarantee. The emergence of hundreds of local free college programs across the country is an indictment of the failure of many states to invest in public higher education. Any federal-state partnership that is created to build an affordability guarantee will need to ensure that states reinvest in public higher education institutions to help maintain lower tuition levels, such as through realistic maintenance-of-effort provisions or other options that support state investments (Natow, 2021). In addition, a federal-state partnership should work to ensure more equitable state funding across institution types, particularly for MSIs, which states have historically underfunded (Cunningham et al., 2014; Harris, 2021) but that play a critical role in upward mobility for many underserved students.

- **First dollar and full cost of attendance**

Perhaps the most central element for cementing an affordability guarantee is that the program actually makes college affordable. Rising tuition levels along with housing, books and supplies, and other living expenses have made college unaffordable for many students. Last-dollar aid and programs that cover tuition expenses only help chip away at college costs, but they only make affordable for **some** students. If policymakers want to design an effective and equitable free college guarantee, first-dollar aid and covering financial need up to the full cost of attendance must be on the table. As we begin to emerge from a pandemic and related economic downturn that has disproportionately affected students who are racially minoritized and from low-income backgrounds (National Center for Immunization and Respiratory Diseases, 2020; Parolin & Wimer, 2020), concerns over college

affordability have been heightened. Absent policy intervention that truly addresses affordability, pathways to postsecondary education, particularly for students who are racially minoritized and from low-income backgrounds, will be closed.

### **Promising design features for accessibility**

- **Weigh benefits of eligibility restrictions and program requirements vs. their costs**

The FAFSA alone has proven to be a barrier that can prevent eligible students from accessing aid. Existing free college programs often pile additional requirements and restrictions on top of any that the FAFSA already imposes. In considering restrictions on who is eligible for aid and under what conditions they can receive that aid, policymakers should embrace a simple and transparent process. They should weigh the benefits of any requirements or restrictions against their costs with an understanding that administrative burdens can reduce the effectiveness of public programs and widen racial and economic inequities (Herd & Moynihan, 2019). When possible, policymakers should shift administrative burdens from students to state and federal governments, using information these governments often already have to determine eligibility and award aid.

- **Reduce reliance on concepts of deservingness and reciprocity**

Restricting a college guarantee to students who are deemed “deserving” of aid can reinforce broader social inequities. For instance, aid programs that require students to meet a specified academic threshold to receive aid tend to be popular because people may perceive that students have earned or deserve access to aid (Bell, 2020). But this aid disproportionately flows to relatively advantaged families. Similarly, the concept of reciprocity implies that students need to do something above and beyond attending college, which is what the aid is directed toward, to deserve aid. By attending college and maintaining satisfactory academic progress, students are doing their part. Volunteer, GPA, or full-time enrollment requirements that ask students to do more than this may be popular but are likely to limit students’ access to aid.

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# 04

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## Federal-State Partnerships: Why Centering Support for Rural, Regional, and Minority-Serving Institutions Can Improve College Affordability and Student Success in the U.S.

BY: VANESSA A. SANSONE

Since the passage of the Higher Education Act (HEA) of 1965, America's colleges and universities have struggled to increase the affordability of a college degree. The HEA policy established the creation of need-based grants, work-study opportunities, and federal student loans, helping the poorest Americans pay for college. The efforts were an attempt to codify college affordability and civil rights to those who had previously been excluded due to financial and racial barriers (Hillman & Orfield, 2022).



In doing so, federal rights and policies were created that centered students rather than focusing on institutions. These student-centered federal policies have combined over time with state governance fiscal support of colleges and universities and have led to improvements in the number of Americans going to college and earning a postsecondary credential (National Center for Education Statistics, 2022, Table 301.20). Despite these federal policy gains, affordability continues to be a key barrier in the nation's efforts to broaden participation and access in postsecondary education, especially for underrepresented and racially minoritized people in the United States (Goldrick-Rab, 2016; Mustafa & Dawson, 2021; Philips, 2022; Tachine & Cabrera, 2021).

There are several contributing factors to the current foundation of U.S. college affordability. One of those factors rests on the partnership between federal and state, in which these multiple levels of government work together to keep college costs down. While need-based grants and loans have been the cornerstone of the federal government's college affordability and access efforts, the funding authorized by Congress to these programs has not kept pace with demand and the changing cost structure needed to offer a high-quality education (Archibald & Feldman, 2012), thereby making loans and/or work for pay a growing share of how families afford college (Goldrick-Rab, 2016; Perna, 2010; Philips, 2022; Shermer, 2021). These financial aid trends are accompanied by contemporary state legislation that has sharply reduced state allocated funding for its higher education institutions (State Higher Education Executive Officers Association [SHEEO], 2022). As a result of these measures, colleges and universities have shifted their costs, relying more and more on tuition and fees to fund their campus operations (Fryar, 2015; McClure & Fryar, 2020; Taylor & Cantwell, 2019), all of which, makes colleges less affordable and prices out low-income students in accessing opportunity (Harris, 2021; Flores & Shepherd, 2014; Rendón, et al., 2012; Rosinger et al., 2022).

Research on college affordability has consistently and rightly focused on understanding the experiences and outcomes of students. Usually, this scholarship examines the interplay between a financial aid policy program

and student success, like the influence a federal Pell Grant has on the likelihood a student will earn a postsecondary credential (Hossler et al., 2009). This body of work has shown how the lack of financial aid particularly disadvantages low-income, first-generation, and racially minoritized students and leads to increased debt, increased hours working for pay while enrolled, and a higher likelihood of dropping out short of finishing a degree (Chen & DesJardins, 2010; Santiago, 2013; Mustafa & Davis, 2021; Sansone, 2017). However, a critical oversight in the public policy conversations about college affordability is the importance of improving institutional funding supports for the colleges and universities who are best positioned to broaden participation in the U.S.—Rural-Serving Institutions (RSIs), Regional Comprehensive Universities (RCUs), and Minority-Serving Institutions (MSIs).

**While need-based grants and loans have been the cornerstone of the federal government's college affordability and access efforts, the funding authorized by Congress to these programs has not kept pace with demand, and the changing cost structure needed to offer a high-quality education.**

**ARCHIBALD & FELDMAN, 2012**

As a sector, RSIs, RCUs, and MSIs educate to the largest share of undergraduate students (86%) in the United States (see Table 1). But they are also educating large proportions of students who have exceptionally high needs—both financial and academic. On average, students enrolled at RSIs, RCUs, and MSIs are likely to have fewer personal/family resources, educational backgrounds dominated by K-12 schools with lower

levels of funding and fewer resources, and many in communities with resource constraints at the community level. Although RSIs, RCUs, and MSIs play a vital component in the education of less privileged students, they are critically under-resourced, especially when compared to the finances of selective flagships and research universities (Crisp, et al., 2021; Maxim et al., 2022, McClure & Fryar, 2020; Ortega, et al., 2015). Collectively this means that these institutions are receiving disproportionately fewer resources while also working to educate and support more students who have disproportionately few resources themselves. This creates a double disadvantage for RSIs, RCUs, and MSIs, which means that this sector of institutions has less to support students who need more. This creates an end result where the likelihood for so many underprivileged people in the U.S. to earn a postsecondary credential and achieve intergenerational mobility is harmed.

Higher education is a public good, and it is the reason why we have created federal and state public funding systems. If higher education was a private good, as a society we would not have public community colleges, career technical colleges, and four-year universities. But we do because we know that public support creates the opportunity for more people to pursue pathways that will lead to greater levels of stability and prosperity not just for the individual but for the U.S. society at large. Choosing to underfund RSIs, RCUs, and MSIs is choosing to restrict a community's ability to support the next generation of people who want to keep building and strengthening a resilient U.S. society. In turn, choosing to under-resource RSIs, RCUs, and MSIs, ask them to produce more, and then penalize them for underperforming is wild, an outright sabotage, and creates a situation where we all lose.

Therefore, the purpose of this report is to better understand the role of RSIs, RCUs, and MSIs; their connection to affordability; and discuss how federal-state partnerships can be designed in ways that support these institutions and improve college affordability and student success in the United States. I do this first by diagnosing and demonstrating the ways in which RSIs, RCUs, and MSIs, as a sector, differ

from selective flagships and research universities. I do this because RSIs, RCUs, and MSIs are often conflated with or compared to selective flagships and research universities. But, as shown, these sectors very much differ, especially regarding their mission and financial resources. Then, I discuss federal policies that are misaligned to mission and character of RSIs, RCUs, and MSIs. I argue these misalignments contribute to inequities in higher education, especially for RSIs, RCUs, and MSIs.

**86% of all undergraduate students pursuing a degree in the U.S. do not attend selective flagships or research universities.**

Last, I highlight federal financial programs, primarily focusing on the CARES Act HEERF funds but also touching on Promise programs, as policies that we can build off to design a more equity-focused federal-state partnership program that can improve overall college affordability and student success. It is important to note that in this report RSIs, RCUs, and MSIs includes private and public not-for-profit community colleges and four-year universities who have broad access missions. I define broad access as institutions with admit rates above 50%. I also define broad access as institutions who do not hold membership with the Association of American Universities (AAU). AAU membership means an institution conducts the highest levels of research. This last point is important because several research institutions hold AAU membership and are federally identified as an MSI. But for the purposes of this report, I follow the operationalization outlined above.

## **DIVERSITY IN THE WAYS INSTITUTIONS SERVE & FUNCTION**

As Table 1 shows, 86% of all undergraduate students pursuing a degree in the U.S. do not attend selective flagships or research universities. Instead, most are enrolled across institutions that are identified as

**TABLE 1:**  
**FY 2021 Undergraduate Student Population by Institutional Types**

UG GRAND TOTAL	SELECTIVE FLAGSHIPS AND RESEARCH INSTITUTIONS (N=186)		RSI, RCU, AND MSI INSTITUTIONS (N=2,341)		TOTAL
	Count	%	Count	%	Count
	1,973,100	14%	12,198,863	86%	14,171,963

*Note: Author calculations using FY 2021 NCES IPEDS institutional data, Alliance for Research on Regional Colleges (ARRC) Rural Serving Institutions data, ARRC Regional Comprehensive Universities data, Center for Minority Serving Institutions data, and Association of American Universities data. UG = Undergraduate*

RSIs, RCUs, and MSIs. When taken individually, these institutions each offer a unique contribution to the U.S. higher education landscape. For instance, RSIs are institutions that have been identified to uniquely serve rural students and communities through the number of degrees they award in agriculture, natural resources, and parks & recreation, which are uniquely important fields to rural communities (Korchich, et al., 2022). RCUs are colleges that historically began as teaching institutions and have comprehensive degree program offerings that often align with the needs of their regional workforce (Orphan & McClure, 2022). MSIs include: a) Tribal Colleges and Universities (TCUs), (b) Hispanic-Serving Institutions (HSIs), (c) Historically Black Colleges and Universities (HBCUs), and (d) Asian American and Native American Pacific Islander-Serving Institutions (AANAPISIs). MSIs are federally classified institutions who enroll and graduate large shares of students from minoritized racial/ethnic backgrounds, many of whom are also low-income and first-generation. Collectively, MSIs offer curriculum and services that are tailored in ways that properly support Black and Brown experiences in higher education and advance racial justice (Conrad & Gasman, 2015; Garcia et al., 2019).

Regardless of differing identity markers, RSIs, RCUs, and MSIs share a similarity in their service to students, which are the intentional ways that an institution structures their support for underrepresented and racialized students that is evidenced through their actions (Garcia et al., 2019). For RSIs, RCUs, and MSIs, service begins with the fact that these institutions offer broad-access admission (Crisp et al., 2021), serving as vanguards for a democratization of American higher education. In doing this, these institutions are not crafting a student body but instead are accepting those who come to seek an education. Related to their broad accessibility, research shows that these institutions enroll a greater share of students with substantial financial need, who are less academically prepared for college, and come from low-income families or families where no parent previously attended college (McClure et al., 2021). And more so than selective flagships and research universities, these institutions are working to support regional communities that are often facing persistent poverty, low employment, and population loss (Orphan & McClure, 2022).

There is also a collective underpinning to how RSIs, RCUs, and MSIs function. Often referred to as our nation’s “workhorse colleges” (Maxim et al., 2022),

these colleges work to intentionally support regional economies, addressing the evolving workforce needs of the community and bringing jobs and employment opportunities to their regions (Howard & Weinstein, 2022). Studies examining whether these institutions have the regional benefits claimed, have found that in addition to economic benefits, RSIs, RCUs, and MSIs contribute “community uplift” through their enhancement of the region’s access to and engagement with civics, art and humanities, transportation, and public recreation (Orphan & McClure, 2022). This differs from the orientation of selective flagships and research institutions that often focus their purpose and contributions on national and international affairs (Orphan & McClure, 2022). In contrast, the function of RSIs, RCUs, and MSIs is embedded within a place-based mission that is very much intentional and focused on keeping regional communities resilient and thriving (Howard, et al., 2021; Orphan, 2020).

Despite their distinct service and important functions in higher education, RSIs, RCUs, and MSIs are often compared to selective flagships and research universities. But as Table 2 shows, selective flagships and research universities organizationally differ from the collective way RSIs, RCUs, and MSIs serve and function. Selective flagships and research universities differ in the types of students they serve, enrolling a larger share of students from wealthy and privileged backgrounds (Carnevale et al., 2020). And as previously mentioned, these institutions focus their efforts on high research activity with national and global developments in mind. With this approach, selective flagships and research universities contribute to the United State’s economic, social, and civic efforts. But at the same time, these institutions foster organizational cultures that do not center the needs of their local community or region (Stevens, 2009).

**TABLE 2:**  
**FY 2021 Variation Among Institutional Types**

INSTITUTIONAL CHARACTERISTICS	SELECTIVE FLAGSHIPS AND RESEARCH INSTITUTIONS (N=186)	RSI, RCU, AND MSI INSTITUTIONS (N=2,341)
	MEAN OR %	MEAN OR %
Enrolled Total	15,191	6,426
Full-Time Equivalent (FTE) Students	13,817	4,615
Part-Time Enrollment	2,224	2,842
Graduate Enrollment	4,562	709
Receive Pell Grant Aid	27%	48%
Undergrads 25-26 Years Old	7%	23%
Admit Rate	38%	86%
Full-Time Equivalent (FTE) Staff	4,905	712

*Note: Author calculations using FY 2021 NCES IPEDS institutional data, Alliance for Research on Regional Colleges (ARRC) Rural Serving Institutions data, ARRC Regional Comprehensive Universities data, Center for Minority Serving Institutions data, and Association of American Universities data.*

**TABLE 3:**  
**FY 2021 Sources of Financial Revenues Per Full-Time Equivalent (FTE) Student**  
**by Institutional Types**

REVENUE PER FTE STUDENT	SELECTIVE FLAGSHIPS AND RESEARCH INSTITUTIONS (N=186)	RSI, RCU, AND MSI INSTITUTIONS (N=2,341)
	MEAN	MEAN
Tuition and Fees	12,250	4,443
State Appropriations	9,899	6,410
Government Grants and Contracts	12,291	7,504
Private Gifts, Grants and Contracts	4,863	711
Investment Return	10,321	603
Other Core Revenue	10,303	2,595

*Note: Author calculations using FY 2021 NCES IPEDS institutional data, Alliance for Research on Regional Colleges (ARRC) Rural Serving Institutions data, ARRC Regional Comprehensive Universities data, Center for Minority Serving Institutions data, and Association of American Universities data*

And because their highly selective admissions practices privilege students from affluent backgrounds, these institutions add very little to our nation’s efforts in expanding opportunity and upward mobility, particularly for marginalized groups. In fact, according to a previous study by Chetty et al. (2017), the institutions contributing the highest rates of social mobility for students are not selective flagships and research universities, but rather they are institutions identified as RSIs, RCUs, and MSIs. For example, Chetty et al. (2017) found that Cal State University – LA has one of the highest mobility rates (47%). By contrast, Brown University (9.4%) and the University of Michigan, Ann Arbor (10%) have one of the lowest. A main takeaway from this previous research reveals that RSIs, RCUs, and MSIs may be a more important driver of economic advancement in the U.S.—more so than selective flagships and research universities.

### **RESOURCE DISPARITIES WITHIN AND AMONG DIFFERENT TYPES OF INSTITUTIONS**

The positive impacts of RSIs, RCUs, and MSIs are stifled by structural inequities that are embedded within state and federal higher education finance systems. This is because state and federal governments have adopted “market-based” funding systems that often punish the work of RSIs, RCUs, and MSIs rather than acknowledge and reward them for their service and contributions (Hillman, 2022; Taylor et al., 2020). Ideally, colleges that enroll more students from less privileged backgrounds should have the extra resources needed to support them in their development. But, as shown in Table 3, RSIs, RCUs, and MSIs receive fewer resources when compared to funding at selective flagships and research institutions (Castro Samayoa, 2022; Koricich et al., 2022; McClure & Fryar, 2020).

The lack of governmental investment is not limited to one entity because RSIs, RCUs, and MSIs are found to receive less funding at all levels of government, including federal (Taylor & Cantwell, 2019). For example, Hispanic-Serving Institutions educate 67% of all Latinos pursuing a bachelor's degree in the U.S., but HSIs on average receive 66 cents per federal dollar given to highly selective flagships and research universities (Calderón Galdeano, et al., 2012; Excelencia in Education, 2020). Considering inequities in state funding between RSIs and highly selective flagships and research universities, Bemidji State University, an RSI in Minnesota serving a rural community struggling with persistent poverty, received \$6,738 in state appropriations and \$5,507 in tuition and fees per FTE (Alliance for Research on Regional Colleges [ARRC], 2022; IPEDS, 2022) whereas Minnesota's highly selective state flagship and research university, the University of Minnesota-Twin Cities, received \$12,507 in state appropriations and \$13,965 in tuition and fees per FTE (ARRC, 2022; IPEDS, 2022). Therefore, Bemidji State, an institution serving a vulnerable region and is more reliant on state funds, is receiving far less per student than their flagship counterpart who has access to several other ways to bring in funding.

The RSI, RCU, and MSI sector are found to be more dependent on tuition and fees as a main source of their revenue and at the same time are more constrained in their ability to generate revenue from other sources (McClure & Fryar, 2020). Revenue constraints of RSIs, RCUs, and MSIs are related to the fact that this sector serves a larger share of students whom less tuition revenue can be realized (Chetty, et al., 2017; McClure & Fryar, 2020). RSIs, RCUs, and MSIs are also found to have, on average, smaller endowments than selective flagships and research universities. Table 4 shows that the average revenue from endowment per FTE student at selective flagships and research universities is much higher than the average endowment per FTE at RSIs, RCUs, and MSIs, from \$262,174 to \$18,734. The RSI, RCU, and MSI sector are also shown in Table 4 to have a larger reliance on state appropriations as a source of their revenue, and at the same time have higher average institutional expenses per FTE than their selective flagships and research institution counterparts. Previous research on RSIs, RCUs, and MSIs revenue constraints has also found that these institutions tend to operate on incredibly lean budgets, struggle to generate private donations, and are disadvantaged in competing for donations from philanthropic foundations (Crisp et al., 2021; Koricich, et al., 2022; McClure & Fryar, 2020).

**TABLE 4:**  
**FY 2021 Revenue and Instructional Expense by Institutional Types**

REVENUE AND EXPENSE	SELECTIVE FLAGSHIPS AND RESEARCH INSTITUTIONS (N=186)	RSI, RCU, AND MSI INSTITUTIONS (N=2,341)
	MEAN OR %	MEAN OR %
Endowment per FTE Student	262,174	18,734
State Appropriation Dependency	8	19
Instructional Expense	39	41

*Note: Author calculations using FY 2021 NCES IPEDS institutional data, Alliance for Research on Regional Colleges (ARRC) Rural Serving Institutions data, ARRC Regional Comprehensive Universities data, Center for Minority Serving Institutions data, and Association of American Universities data. FTE = Full-Time Equivalent*





**RSIs, RCUs, and MSIs are also found to have, on average, smaller endowments than selective flagships and research universities.**

In contrast, the finances of highly selective flagships and research universities differ greatly from the RSI, RCU, and MSI sector because these institutions are much more successful at generating revenue from various sources. These institutions are financially successful for several reasons. For one, using a systemic preferencing admissions process enables these institutions to “craft a class” (Stevens, 2009) of privileged students who have successful life outcomes (Chetty et al., 2017). This, in turn, generates an economically homogenous class of wealthy students, which has been found in research to increase private giving (Guilbeau, 2022). It also generates institutional prestige (Stevens, 2009). In other words, crafting institutional prestige enhances fundraising efforts and concentrates private giving funds at selective flagships and research universities (Guilbeau, 2022). These institutions are then able to create environments where their robust institutional development offices can tap directly into a global network of wealthy donors,

alumni, and families of students (Carnevale, 2020). This process yields hefty financial endowments that can support unrestricted institutional efforts. In other words, these institutions have “sovereign wealth funds” (Gura, 2022) because funding from this source is not mandated by governmental bodies and can be used toward whatever they need.

Indeed, wealthy universities have billion-dollar endowments, with many public college endowments exceeding those at private universities. For example, the University of Texas at Austin (UT Austin), a highly selective public flagship university, has a \$42.3 billion endowment and is aiming to overtake Harvard University’s \$50.9 billion endowment (Gura, 2022). UT Austin’s endowment has grown in large part to their wealthy donors and alumni who have donated oil-rich land, energy, and mineral rights to UT Austin through wills or living trusts (University of Texas at Austin, 2023). Without these land holdings and access to the generational wealth of their donors and alumni, it is fair to say that UT Austin’s endowments would not be where it is today.

Furthermore, the crafted class of wealthy families means that many of its students can afford costs, including high tuition and fees. This also means that most students at highly selective flagships and research universities rely less on federal financial aid because many do not qualify or need its support.

More importantly, this signals that the composition of the students being served at selective flagships and research universities are not economically diverse. Instead, these campuses are economically homogenous, with most students coming from wealthy families. The 2017 study by Chetty et al. (2017) further corroborates this point when they examined the economic diversity of U.S. colleges and universities. They found that the composition of students at highly selective flagships and research universities are “richer than experts realized” (Aisch, et al., 2017). For example, at the University of California Los Angeles (UCLA), the share of students from families in the bottom 40% of income was 19.2% (Chetty et al., 2017). At Notre Dame, the annual median family income is \$191,400, with 75% of their students coming from families making \$110,000 or more a year (Chetty et al., 2017). Both UCLA and Notre Dame are institutions within the sector of highly selective flagships and research universities and demonstrate serving large populations of wealthy families. In comparison, the median family income of students attending Bernard M. Baruch College in New York City is \$49,700, which is an institution from the RSI, RCU, and MSI sector (Chetty et al., 2017). Because a larger share of selective flagships and research universities’ college students are affluent and do not rely on government support to pay for college, this sector of institutions are also less reliant on state and federal funding. Thereby making the selective flagship and research university sector more resilient to any decline in state and federal funding, natural disaster, or enrollment decline.

## FINANCIAL POLICIES EXACERBATING INSTITUTIONAL INEQUITY

With the resource disparities that were described in the previous section, one could argue that these results are random, and are not an outcome related to governmental financial policies. For instance, if an individual wants to donate their priceless art and land to support the long-term financial efforts of highly selective research universities, like Princeton University or the University of Wisconsin-Madison, that is an individual choice. But there are also instances where federal policies do play a significant role in exacerbating financial inequities among institutions of higher education. And where these inequities hit the hardest are at RSIs, RCUs, and MSIs. In this section, I will discuss two examples related to federal financial policymaking.

### Federal Funding Initiatives at RSIs, RCUs, and MSIs

RSIs, RCUs, and MSIs are eligible to apply for extra funding through federal grant programs, but even when the opportunity for targeted eligibility is offered, like in the case of MSIs, there remains a disproportion between awarded funding and institutional type. For example, 79% of the National Science Foundation’s total awarded funding during FY 2022 was awarded and channeled to selective flagships and research institutions (see Table 5). The process to secure these funds is application-based, requiring skill in grant writing, and does not consider the challenges RSIs, RCUs, and MSIs face in procuring competitive federal grants. Therefore, RSIs, RCUs, and MSIs often

**TABLE 5:**  
**National Science Foundation Grant Awarded Funding during FY 2022 by Total Funding Amount and Institutional Type**

TOTAL FUNDING AMOUNT	SELECTIVE FLAGSHIPS AND RESEARCH INSTITUTIONS (N=186)		RSI, RCU, AND MSI INSTITUTIONS (N=2,341)	
	SUM	%	SUM	%
	\$3,563,945,465	79%	\$956,945,641	21%

Note: Author calculations using FY 2022 National Science Foundation Awarded Grants from USA Award Data Spending Archive, Alliance for Research on Regional Colleges (ARRC) Rural Serving Institutions data, ARRC Regional Comprehensive Universities data, Center for Minority Serving Institutions data, and Association of American Universities data. Excludes any missing recipients. Includes only grants to colleges and universities that were awarded during the 2022 fiscal year.

do not apply for extra federal funding opportunities because they do not have the operational resources in personnel, time, skill, and state-of-the-art infrastructure that is needed to file a competitive application (National Academies of Sciences, Engineering, and Medicine [NASEM], 2019). For example, at California State Northridge, a public RCU, a quick review of their research and sponsored programs website reveals a pattern where the same person is tackling critical grant writing tasks for multiple colleges that at highly selective flagships and research universities would be assigned to one person or even teams.

**79% of the National Science Foundation's total awarded funding during FY 2022 was awarded and channeled to selective flagships and research institutions.**

In addition to grant writing resource considerations at RSIs, RCUs, and MSIs, researchers have also pointed out other federal legislation paradoxes failing RSIs, RCUs, and MSIs. For instance, there are several colleges that hold dual MSI federal designations. But under the HEA Title III, Part A, campuses are not eligible to apply for multiple federal grants simultaneously (Castro Samayoa, 2022). Therefore, colleges who hold dual federal identities, like being an HSI and AANAPISI, as one example, can only apply for grants under one designation (Herder, 2022). In practice, this means such campuses are engaging in an opportunity cost, forcing them to choose supporting one student population over the other. Also, recently RSI researchers have pointed out that there is a misalignment with the federal financial policy and their support of RSIs. Part Q of the HEA authorizes funding to RSIs, but to this day there have been no funds allocated to carry out these funding efforts (Koricich, 2022). It must be noted that HBCUs and TCUs do receive targeted federal funding from legislative

appropriations that allow for these colleges to receive a grant and not go through the competitive process (NASEM, 2019).

### **Institutional Accountability Measures**

Recently, policymakers have proposed public funding for colleges to be directly linked to performance metrics. This has been done to hold institutions accountable to taxpayer investment. But researchers have discovered that such accountability measures are often associated with institutional wealth (Orfield & Hillman, 2018). In a contemporary study on government-college risk sharing and institutional accountability, researchers found that student loan repayment was a function of an institution's high revenue and high-income student population (Hillman, 2022). In other words, the more money and wealthy students an institution enrolled, the greater their likelihood was of having a high student loan repayment rate for their institution. Accountability policies that ask for increased institutional output using measures that are not in-put adjusted to not account for differences in institutional resources, missions, and the characteristics of the student population, penalizes the very colleges and universities who are serving larger shares of underprivileged and underserved students (Orfield & Hillman, 2018).

RSIs, RCUs, and MSIs fall into this bind because of the large share of students they serve who come from less privileged backgrounds and an unequal public education schooling system. Because RSIs, RCUs, and MSIs enroll a disproportionate share of historically marginalized students, using accountability measures that favor family wealth and institutional prestige end up reducing resources to the students who need extra guidance and support the most. Despite previous empirical findings, accountability approaches do not consider these differences. Take for example, data from the U.S. Department of Education's College Scorecard, put forth during the Obama administration, which allows a user to compare institutions on such measures as average earning potential, four-year graduation rate, and debt after graduation. Table 6 shows the comparison of two colleges, one from each sector. Looking at this data without accounting for institutional context, like mission and resources to produce high

**TABLE 6:**  
**College Scorecard Variation Among Institutions**

COLLEGE SCORECARD METRIC	UNIVERSITY OF FLORIDA (SELECTIVE FLAGSHIPS AND RESEARCH INSTITUTION)	FLORIDA A&M UNIVERSITY (RSI, RCU, AND MSI INSTITUTION)
	# OR %	# OR %
Average Annual Cost	5,135	13,126
4-Year Graduation Rate	88%	55%
Median Earnings	64,463	42,521
Percentage Earning More Than a HS Graduate	77%	54%
Students Receiving Federal Loans	15%	68%
Median Total Debt After Graduation	15,580	25,000
Typical Monthly Loan Payment	155	249
Repayment Rate	29%	7%
Acceptance Rate	31%	33%
Undergraduate Enrollment	34,237	7,072
Socio-Economic Diversity (i.e., Percentage of Students who are Pell Eligible)	22%	66%
Asian Student Population	10%	0%
Black Student Population	6%	89%
Hispanic Student Population	23%	5%
White Student Population	51%	3%

*Note: Pulled using 2022 U.S. Department of Education College Scorecard Data Comparison Tool*

success outcomes, paints a deficit picture of Florida A&M University, an HBCU within the RSI, RCU, and MSI sector. To fairly judge these outcomes, these institutions would need to be equal across measures—apples to apples on finances, student characteristics, etc. But, in reality, the College scorecard data measures apples to oranges, which means that comparisons can be misleading since these outcomes are more of a function of familial and institutional wealth (Orfield, 2018).

### **EVIDENCE ABOUT HOW COLLEGES ARE SPENDING AND ITS RELATIONSHIP TO STUDENT SUCCESS**

Access to limited resources is a significant issue that RSI, RCU, and MSI administrators cite as the greatest challenge they face (Sansone, 2023b). Because of budgetary issues, these colleges struggle to develop and maintain important positions, programs, and services that help enroll, retain, and graduate their students (Deming & Walters, 2017; Webber &

Ehrenberg, 2010). Research shows that when colleges increase their spending on student services and supports, graduation rates and student success outcomes improve (Deming & Walters, 2017). Thereby, research evidence strongly supports that when a college reduces services and supports for its students, success outcomes only worsen. For example, the University of Colorado Denver (CU Denver), a public RCU, made a recent statement that the university was experiencing a \$12 million budget shortfall that would result in positions and student services being eliminated (Brundin, 2022). A website informing the public about CU Denver's budget mentions two important factors that contributed to their financial shortfall: a) keeping tuition and fees affordable in the interest of their students; and b) state funding for research institutions not keeping pace with inflation (CU Denver, 2022).

To improve their finances, CU Denver, whose student body include 55% underrepresented students, has decided that it will engage in the practices of reducing the number of classes offered, increasing class sizes, moving courses online, and lowering pay for graduate teaching assistants (Brundin, 2022). All these moves represent opportunity costs measures that contribute less to student success and graduation. It also demonstrates why campus fiscal resources is significantly related to student success, especially for historically marginalized students (Astin, 1993; Deming & Walters, 2017; Webber & Ehrenburg, 2010). In other words, student success is not just about students – the operational decisions of higher education institutions and its capacities are just as important.

The example of CU Denver provides a very real example of the vulnerability of RSIs, RCUs, and MSIs, who are being asked to do more with funding that can only be stretched so far to support large populations of underrepresented students (McClure & Fryar, 2020; Ortega et al., 2015). This is important because research has shown that when institutional resources are equal across institutions, RSIs, RCUs, and MSIs graduate similar students at the same rates as their selective flagships and research counterparts (Rodríguez & Calderón Galdeano, 2015). The main differences being disparities in funding and differences in the proportion of underrepresented students enrolled. This points

out how systemic inequities in institutional funding creates barriers to service and function of RSIs, RCUs, and MSIs, which ultimately disadvantages marginalized students and contributes to a stratified U.S. higher education system.

### **Promising Federal-State Partnerships that Invest in Institutions to Support Students**

The federal funding through the Coronavirus Aid, Relief and Economic Security (CARES) Act: Higher Education Emergency Relief Fund (HEERF) is identified as a promising program where the federal government worked with states to direct federal funds to institutions serving large populations of students from low income backgrounds who were most negatively impacted by the pandemic. In this section, I describe the federal program, discuss how institutions used the funding to support its students, mention the policy's shortcomings, and show why this is a promising federal-state partnership program.

### **The CARES Act: HEERF Funding as a Promising Federal-State Partnership Centering Institutional Characteristics for Student Success**

The 2020 Coronavirus Aid, Relief and Economic Security (CARES) Act: Higher Education Emergency Relief Fund (HEERF) funding is a federal program and set of policies designed to provide fast and direct economic assistance to postsecondary students who have been negatively impacted by the COVID-19 pandemic and the institutions that enroll them. However, this policy differs from past federal funding policies because institutions accepting these funds were required to distribute at least 50% of the money directly to students as emergency student financial aid. The remaining percentage of funding could be used for institutional relief. The reason for this was that many campuses were unprepared for the sudden shift to online learning, and had to incur additional costs such as training faculty to teach online, and facilitating the relocation of students back home.

In addition, several campuses lacked the infrastructure, technological personnel, and technical resources to suddenly switch all campus business and its courses entirely online. Because of these substantial institutional

costs associated with the pandemic, campuses were given flexibility in how they wanted to spend the institutional funding of the relief. At the same time, institutions were required to submit detailed reporting about how the campuses used these federal funds. Thus, the policy was designed in a way that allowed higher education institutions with the ability to disperse funds in ways that make sense for the specific needs of their students, and considers the institutional cost related to accomplish this level of support.

Funding via the CARES Act was designed by the federal government to provide funding to institutions, and its students, in a way that incorporates meaningful considerations of wealth-based differences among higher education institutions. The policy included a focus on MSIs, a consideration of variations in institutional endowments, and a set-aside, controlled allocation to students. The design of the policy clearly demonstrated that a specific aim of this policy is to address the disproportionate socioeconomic disadvantages and racial injustices that were in place before the pandemic outbreak and have since been made worse.

MSIs have been hit the hardest by the pandemic. They have experienced the sharpest declines in enrollment than highly selective flagships and research universities (Office for Civil Rights, 2021). Black, Indigenous, and People of Color (BIPOC) college students, who are more likely to be enrolled at MSIs, have also shown that they are more likely to report that they experienced challenges in shifting to online learning during the pandemic, including finding a quiet place to study, losing their jobs, financing their college educations, and taking care of their families (Fishman & Hiler, 2020). National data also showed that COVID-19 has disproportionately impacted BIPOC communities in the United States, with more deaths and job loss related to the pandemic than White Americans (Monte & Perez-Lopez, 2021; Sáenz, 2021). The inequitable financial capacities of MSIs, declining enrollments, lost job opportunities for students to pay for college, and reductions to federal and state appropriations posed even greater risks to the educational opportunities MSIs afford historically

marginalized students. Therefore, the policy considered that not all institutions are organizationally the same and experienced the pandemic in different ways.

**The policy was designed in a way that allowed higher education institutions with the ability to disperse funds in ways that make sense for the specific needs of their students, and considers the institutional cost related to accomplish this level of support.**

#### **Institutional Aid Spending Patterns**

Institutions have responded to the CARES Act funding in different ways, especially when considering the institutions within the RSI, RCU, and MSI sector. Data pulled from CARES Act HEERF reports reveals that despite the policy having a focus on institutional relief, RSIs, RCUs, and MSIs used CARES Act funding in different ways to intentionally support its students (U.S. Government Accountability Office [GAO], 2021). For example, new research exploring how seven HSIs in Texas used CARES Act funding found these institutions adopted eligibility procedures that intentionally considered the long- and short-term successes of their students and used their own HEERF institutional funds to limit or erase student debt, provide access to wellness services, and upgrade instructional and infrastructure resources (Sansone, 2023a).

For instance, this recent research shows that the University of Texas at San Antonio (UTSA) was allocated a \$73.1 million student portion, \$92.7 million institutional portion, and \$10.6 million MSI portion, which totaled \$176.4 million in HEERF funding (U.S. Department of Education Stabilization Fund, 2020). As of FY22, 63% of the HEERF funding has been spent on helping students pay their tuition and fees and pardon debt. This approach included providing students with housing refunds



when dorms closed during the pandemic and providing students with financial assistance during the pandemic to pay for the cost of tuition, food, housing, technology, health care, child care and course-related expenses (University of Texas at San Antonio [UTSA], 2022). As of December 2022, UTSA reported that they provided HEERF funds to 37,733 students and had grown their enrollment (from pre-pandemic figures) and the number of degrees awarded (Boerger, 2022).

These findings are significant given that beyond the policy's controlled allocation to students, each institution could determine their own disbursement and eligibility procedures. And although this could have resulted in an approach where students and their needs were left at the margins, the opposite was found. Instead, these institutions used their direct relief aid in ways that were intentional, centered the needs of their students, and addressed institutional resource issues that would promote long-term student success (Deming & Walters, 2017). In doing so, these HSIs were engaging in what Garcia, et al. (2019) have referred to as "servingness", which are the organizational moves of an institution that considers external factors like racial and wealth inequities, to create justice and opportunity for its students. And as demonstrated by the findings reported from UTSA, students, and the institutions they attend, are weathering the disruption caused by the pandemic.

### **Policy Misalignments with MSIs**

The CARES Act HEERF policy considerations around wealth, socioeconomic, and racial injustices could have long- and short-term implications for the

BIPOC community, especially those enrolled at MSIs. Although the CARES Act policy allocates additional funding to federally defined MSIs, some of the policy design choices disadvantage MSIs, when compared to selective flagships and research universities. These disadvantages are embedded in the ways in which the policy utilizes common student-level metrics in the allocation of funding. CARES funding allocations are based, in large part, on a full-time equivalent enrollment and Pell Grant recipient formula, which disadvantages MSIs since they tend to enroll large populations of students who: (a) enroll part time; (b) do not submit a free application for Federal Student Aid (FAFSA); and (c) do not qualify for federal aid (i.e., Dreamer students) (Conrad & Gasman, 2015).

Also, despite the laudable efforts to tailor the policy in a way that supports underfunded institutions and students, allocating funds in this way still makes the CARES Act a one-size-fits-all policy that does not consider the unique characteristics of MSIs and their students. More importantly, the CARES Act design and implementation does not acknowledge how the financial infrastructures of MSI campuses have been historically constrained by long-term municipal, state, and federal funding inequities. This has distributed to each MSI a lower share of CARES Act funding than what is necessary to support high-need students, which handicapped relief efforts to the very institutions these funds are meant to support.

### **Why This Is a Promising Federal-State Partnership Finance Program**

To address concerns over affordability, policy programs aimed at making college more affordable must include commitments from both federal and state, a partnership. Recently, there has been a proliferation of attention given to one program that involves federal and state dollars working together to lower college costs—Promise programs. Overall, Promise programs disburse a combination of federal financial aid funds and state (or municipal) funds to students, who usually live in a particular geographic area, with the intention of covering the costs of their tuition and fees (Li & Gándara, 2020; Perna & Leigh, 2018). Promise programs vary in their design. But regardless of its design characteristics, research shows that Promise program interventions disburse funds to students, losing the thread of the institution and its financial needs in addressing the policy problem of college affordability (Gándara & Li, 2020). But if we want to create policy interventions that address broader inequities in higher education, we must build off and learn from the positives that interventions like Promise programs have shown us, by creating federal-state partnership programs that support students and the institutions they attend.

**To address concerns over affordability, policy programs aimed at making college more affordable must include commitments from both federal and state, a partnership.**

As such, the CARES Act HEERF funding is a promising policy intervention that does just that—considers not only historically marginalized students, but also the institutions, RSIs, RCUs, and MSIs, who are serving them. Because, as demonstrated here, institutional relief for these institutions matter in addressing

inequities and advancing underrepresented student success. If left unaddressed, an unequal and segregated higher education system will continue to emerge whereby people of color and the poor will be limited to attending less resourced institutions and subjected to lower-quality instruction. And because having fewer institutional resources results in worsening student success outcomes (Deming & Walters, 2017), not considering institutional funding of RSIs, RCUs, and MSIs will continue to exasperate the disproportionate affordability, wealth, and social mobility inequities that occur for so many today.

Additionally, the CARES Act design shows that when nonprofit higher education institutions who have a mission to serve high populations of less privileged students are given control of the institutional relief disbursement, these institutions will spend in ways that they know will best support their students. Therefore, a potential solution would be to create a one-to-one federal-state matching program that includes student aid and institution relief aid restrictions, a design that follows and builds off the CARES Act relief aid model and Promise programs models. This approach will not only directly support students by reducing their reliance on debt, but also maintain that those institutions who are contributing access and social mobility have the capacity to continue providing broad access, quality learning, and student success.

### **DISCUSSION AND FEDERAL-STATE PARTNERSHIP POLICY CONSIDERATIONS**

My goal in writing this report was to bring to the affordability conversation an awareness about how institutional resources matter in making college more affordable. In doing this, I wanted to consider the work of RSIs, RCUs, and MSIs, who serve large shares of historically marginalized students, including low-income students. And I wanted to add to the descriptive understanding about how RSIs, RCUs, and MSIs organizationally differ from selective flagships and research universities, especially in terms of financial resources, and describe how these differences disadvantage RSIs, RCUs, and MSIs. Examining affordability from a perspective that does not consider RSIs, RCUs, and MSIs and their institutional resource



capacities, misses their unique strengths and potential to not only make college more affordable but also close racial and wealth attainment gaps in the United States.

The contributions of RSIs, RCUs, and MSIs and their students have been constantly compared to selective flagships and research universities, often rendering them incapable or ineffective. Yet, as I have demonstrated, selective flagships and research institutions are not the key to educating and improving postsecondary credentials for historically marginalized students in the United States. Instead, RSIs, RCUs, and MSIs play a key role in our society because they are educating more students, especially those from historically marginalized backgrounds, and offer them a pathway to a postsecondary credential. Despite this work, my results provided descriptive evidence that shows RSIs, RCUs, and MSIs are not resourced sufficiently, and this harms them in their ability to help more students from less privileged backgrounds. Disparities were found between the sectors of RSIs, RCUs, and MSIs, and selective flagships and research institutions with regards to institutional resources, funding levels, tuition and fees, and access to federal grants.

Overall, my findings demonstrated how inequities are embedded within the postsecondary educational funding system – advantaging and rewarding students who are already financially privileged as well as the institutions they attend. It also challenges conceptions of affordability that only considers direct supports to students by showing the relationship between institutional resources, affordability, and student success outcomes. This study also demonstrated that the most vulnerable students who need supports to afford and be successful in college are overrepresented among RSIs, RCUs, and MSIs. These institutions are being asked to do more with less, contributing to a stratified higher education system with clear winners and losers. Therefore, policy discussions about affordability need to consider this group of colleges and universities, and acknowledge their differences and contributions.

To address this problem, I have outlined key takeaways for consideration in the design of a one-to-one match federal-state partnership program that centers the work of RSIs, RCUs, and MSIs, has equity perspectives, and avoids deficit frames. This approach builds off the

federal-state practices identified in the CARES Act HEERF funds and Promise programs to offer a more promising federal-state partnership for institutions who are asked to educate a disproportionate share of students who otherwise would have been priced out or excluded from higher education; thereby, designing a federal-state partnership that not only works to improve affordability, but also dismantles a stratified U.S. higher education system.

- **Consider not only federal finance student support but also institutional support.**
- **Consider funding and supporting the institutions who are advancing social mobility in the United States: RSIs, RCUs, and MSIs.**
- **Consider direct delivery of funds to campuses but include clarity about funding restrictions and guidelines.**
- **Use allocation metrics that align with the unique institutional characteristics of RSIs, RCUs, and MSIs (e.g., use full-time headcount, not full-time equivalent).**
- **Consider using institutional reporting procedures that identify how each institution spent their funds.**
- **Consider not penalizing states that invest more in their MSIs than other states.**
- **Consider using strong language that makes clear that this funding is intended to supplement funding packages, not supplant state investment.**

Attending to these considerations has the possibility to create a one-to-one match federal-state partnership program that is reciprocal in nature, and where federal, state, and colleges might be more likely to improve college affordability and student success.

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# 05 Improving and Using Data to Close Success Gaps

BY: DAVID R. TROUTMAN

## ABSTRACT

In the early 2000s, the U.S. Department of Education provided grants to states to develop new statewide longitudinal data systems (SLDSs) that would help states collect and use P-20W data. Today, several states have SLDS that report postsecondary outcomes, and most states provide annual reports on student progress by state, sector, institution type, and institution. However, not all states link their P-12, postsecondary, and workforce data sets together, and the types of data collected and linkages between data vary by state, making it difficult to attain a deeper understanding of factors that affect student outcomes.



This paper will explore what longitudinal data or data actions the federal government should incentivize states to collect, link, report, and take action to enable federal and state higher education leaders and policymakers to create positive levers of change (e.g., track the impact of funding, policy changes, curricular changes, etc.) to reduce success gaps that exist in higher education.

## INTRODUCTION

The American Dream has been a long-standing societal compact between individuals and education, emphasizing that individuals who work hard and receive an education will experience increased opportunities and prosperity (e.g., economic and non-economic value). Several studies have demonstrated educational credentials' impact on lifelong economic growth (Carnevale, Rose, & Cheah, 2013) and the increased likelihood of upward income mobility in our society (Chetty, Friedman, Saez, Turner, & Yagan, 2017). However, economic and non-economic values are not equitable, and these inequities skew Americans' perceptions of the value of education. Based on the 2019 Gallup survey, 46% of individuals are dissatisfied with the quality of K-12 education in the U.S. Only 53% of survey respondents indicated that a college education is very important (Gallup, 2019). Even more problematic is the rating on the importance of college education has dramatically dropped by 17 points in just six short years.

There are several factors (e.g., college affordability, opportunity costs, and college loan debt amounts) for why there is a decline in perceptions of educational quality and importance. One factor to consider is the inequitable educational and workforce outcomes for students of color, women, students from low-income families, and other marginalized groups. For example, the Center on Education and the Workforce at Georgetown University (Carnevale, 2021) found that children from low-income families who score in the top half of their class in kindergarten only have a 31 percent likelihood of receiving a four-year college degree and finding a job by age 25. In contrast, students from more high-income families (top income quartile) who score in the bottom half of their class have a 71 percent likelihood of achieving the same outcome (Carnevale, Fasules, Quinn, & Campbell, 2019). One possible

factor for why individuals' perceptions of the value of education have lowered is because people are not experiencing the same types of returns to education compared to their peers.

Studies have found that wealth inequalities create barriers to education and social mobility (Braga, McKernan, Ratcliffe, & Baum, 2017). For example, even when students of color and women complete a college degree, they are not reaping the same economic benefits that White men experience. Earnings gaps for people of color and women have existed for decades. Troutman and Creusere (2021) linked earnings data (i.e., Unemployment Insurance Wage Records) with higher education data. They found that after students who received a bachelor's degree, White and Asian men earn more than women and students who are African American and Hispanic. Earnings gaps were even more evident in STEM-related fields of study. For example, one year after receiving the same degree in computers, statistics, or mathematics, people of color earned \$7,000 less than White students. This earning gap only increases over time for students of color. By the 10<sup>th</sup> year in the workforce, African American and Hispanic graduates earn \$30,000 less per year than their White peers.

**One possible factor for why individuals' perceptions of the value of education have lowered is because people are not experiencing the same types of returns to education compared to their peers.**

We can use the power of longitudinal data to help shine a light on outcome disparities that exist. Moreover, we can use data insights to enhance policies and increase funding to provide equitable resources for individuals to thrive in our society. This paper will explore what longitudinal data the federal government

should incentivize states to collect, link, report, and take action to allow federal and state higher education leaders and policymakers to create positive levers of change (e.g., track the impact of funding, policy changes, curricular changes, etc.) to reduce success gaps that exist in higher education. I will briefly review the Department of Education's past funding efforts to create and enhance SLDSs. I will describe the current status of SLDSs (types of data collected and how those data are applied). I will discuss the language used to describe equity and disparities in student success outcomes. Lastly, I will introduce possible longitudinal data items and actions that the federal government should consider funding SLDSs to close success gaps.

**Forty-nine states and other U.S. territories (e.g., Puerto Rico, Virgin Islands, and Guam) have received at least one SLDS grant.**

## **EVOLUTION OF THE SLDS GRANT PROGRAM**

From 2006 to 2019, the U.S. Department of Education's National Center for Education Statistics (NCES) Institute of Education Sciences (IES) awarded more than \$825 million to 142 grantees through seven competitive grant cycles (Institute of Education Sciences, 2020). Earlier grant cycles (e.g., 2006 and 2007) funded states to establish K-12 data systems. Grants awarded in 2009, 2009 the American Reinvestment and Recovery Act (ARRA), and 2012, requested that grantees focus on including additional data from either pre-kindergarten, postsecondary, workforce, or teacher-student data to their existing SLDSs. In 2015, the grant requirements shifted focus from integrating new data to using data in specific areas (e.g., educator talent management, college and career, evaluation and research). In the most recent grant release in 2019, grantees were required to focus on either infrastructure, equity, or education choice.

For additional information on the SLDS Grant Program, please visit <https://nces.ed.gov/programs/SLDS>.

Forty-nine states and other U.S. territories (e.g., Puerto Rico, Virgin Islands, and Guam) have received at least one SLDS grant. Multiple states have received two or more grants, with the state of Pennsylvania receiving the most with five grants. The only state that has not received funding is New Mexico.

In May 2022, the IES SLDS Grant Program established an SLDS FY2019 Equity Workgroup and released the first of a series of four briefs highlighting the equity road map that will be used to identify and address equity (Gillaspy, et al., 2022). The workgroup did not provide a clear definition of equity but instead suggested that equity is multidimensional. They stated that equity could be all or part of the following:

*"...parity among student groups in terms of education access and outcomes; a fit between available resources and student needs; and adequate effort to lessen the effects of structural disadvantages that disproportionately affect different student groups" (Gillaspy, et al., 2022).*

The workgroup suggested that SLDS teams work with equity offices or equity officers, engage with existing SLDS stakeholders, obtain insight from individuals the data represents, and use resources from the Common Education Data Standards to help craft your equity definition. Based on the most recent SLDS funding (2019), the Virginia Department of Education used its funding to create SLDS equity-focused research questions. As a part of the effort, the Virginia Longitudinal Data System (VLDS) released the VLDS research agenda, which included a promising example of a definition of equity. They defined equity as "the creation of opportunities for historically underrepresented populations to have equal access and equitable opportunity. Equity is also the process of allocating resources, programs, and opportunities to employees, customers, and residents, to address historical discrimination and existing imbalances" (VLDS, 2021). Virginia took advantage of its latest SLDS funding to integrate equity within the VLDS operating culture. Next, we will examine the current status of SLDSs in terms of the data they are collecting and how they are used.





## CURRENT STATUS OF SLDSs

NCES-IES distributes a survey to all SLDS administrators to capture what is happening in the field. The 2018 survey (most recent) surveyed 48 states and territories. Based on the survey questions, we can dive deeper into what types of K-12, postsecondary education, and workforce data at the student-level are included in the SLDSs. A high percentage of (>80%) states have the following data points that are fully functional in SLDSs: demographics, grade level, school enrollment and completion, transfer in/out, homelessness status, dropout history, attendance, and assessments (statewide summative). A moderate percentage (61% to 78%) of states account for the following types of data in SLDSs: for other program participation (e.g., free and reduced lunch, Title 1, English language learners, and special education programs), in-state dual enrollment, diploma/certificate, course enrollment, assessments: college readiness, course completion, migrant status, virtual school/learning, discipline, assessments: not by grade/subject, and assessments: A.P. scores. Even fewer states have data on assessments: kindergarten entry (45%), out-of-state dual enrollment (35%), assessments: statewide benchmark (33%), assessments: local benchmark (24%), and instructional methods used in the classroom (8%) (NCES, 2021). Now we have a sense of what types of data are linked, we can now explore how SLDS are using the data for decision-making.

SLDSs responded to the following questions: “How do states and territories use data for reporting and decision-making?” States were given five responses to

choose from (not answered, not planned, operational, in progress, and planned) and to respond to five different data-use cases: 1) resources for the public, parents, and community members, 2) policy updates/changes, 3) instructional support, 4) funding decisions, and 5) curriculum decisions/materials. Due to the purposes of this paper, I will focus on the percentage of states that responded with “not planned” by data-use cases. Most states who responded have not planned to use SLDS data to enhance curriculum decisions/materials across all data sectors (e.g., 55%: K-12 student; 65%: postsecondary; 73%: Perkins Career and Technical Education (CTE); and 63%: early childhood). More than 50 percent of SLDSs have “not planned” to use the data for instructional support within the postsecondary and early childhood sectors. And more than a third of the states are not using SLDS data to enhance policy for the postsecondary, workforce, Perkins CTE, and early childhood sectors. Surprisingly, almost one out of four SLDSs reported not planning on using the K-12 student data to improve policy. Almost half of the SLDSs do not plan on using data to inform instructional support for postsecondary, Perkins CTE, and early childhood.

Understanding how many states link K-12 student data in the SLDS to other data sources (e.g., K-12 teacher, postsecondary, workforce, Perkins CTE, and early childhood) is crucial. The following percentages identify the states that have data fully functional (i.e., automated links) by sector of data: K-12 teacher (43%), postsecondary (51%), workforce (31%), Perkins CTE (53%), and early childhood (53%).

**Based on the State Higher Education Executives Officers Association (SHEEO)'s Strong Foundations survey in 2020 (SHEEO, 2020):**

- **43 states** currently link or plan to link K-12 data with postsecondary data
- **43 states** currently link or plan to link postsecondary data to workforce data
- **34 states** can access both K-12 and workforce data elements
- **23 states** currently link or plan to link postsecondary data to early childhood data
- **44 states** have access to remedial course information

*For additional information, please visit SHEEO's interactive tool to examine the survey results (<https://postsecondarydata.sheeo.org/data/>). A further evaluation of the current status of SLDSs was conducted by the Education Commission of the States (Jamieson, von Zastrow, & Perez Jr., 2021). It can be found at the following web location: <https://www.ecs.org/state-longitudinal-data-systems/>.*

The IES SLDS Grant program has significantly contributed to ensuring states have the resources to create and enhance SLDSs. However, much more work must be done to ensure all states link data together to inform policy, practice, and outcomes. Along with the progress, connecting data has its challenges and limitations. Perez (2017) noted the following types of issues could impede SLDS: 1) capacity issues with staff turnover in state agencies

to ensure continuity in data-sharing efforts; 2) the political landscape can impact priorities which can result in financial barriers (i.e., budget constraints) to ensure data are connected, and 3) ongoing public concerns on privacy and appropriate uses of the data. One way to combat these ongoing battles is to create state laws (e.g., Kentucky, Maryland, and Texas) requiring continuing support to maintain and enhance longitudinal data (DQC, 2022). SLDSs have limitations based on geographic restrictions.

It only captures within-state data on student outcomes and might exclude students who do not attend public school or students who relocated to a state as a teenager or young adults (Hough Jr & Beard, 2017). Hough and Beard (2017) also argue that SLDSs should broaden the quantitative and qualitative metrics to quantify student success (e.g., exposure to new ideas and job satisfaction). I need to emphasize the importance for states to enhance data collection on student-level workforce data (i.e., unemployment insurance wage records). Specifically, only a couple of states in the country collect data on the location of employment, occupational title, and hours worked. This information is critical to have a deeper understanding of the local, regional, and state workforce needs. This review highlights several blind spots for SLDSs to focus on, especially when considering equity and equitable outcomes. I will now propose additional longitudinal data to expand on what the Department of Education introduced in 2019 regarding equity and how we can close success gaps among various groups of students. Before I introduce the proposed longitudinal data, I first want to address the language we use to describe the disparities in educational and economic outcomes.

## **THE POWER OF LANGUAGE: SUCCESS GAPS VERSUS EQUITY GAPS**

For several years, educational professionals have been displaying differences in educational outcomes by students' characteristics (e.g., race/ethnicity, gender, family income, etc.) and referring to them as equity gaps. Bensimon and Spiva (2022) state that we must reframe using the term "equity gaps" to describe disparities in education outcomes by race/ethnicity, gender, and income. They argue that by using the term "equity gaps," professionals unintentionally blame educational outcomes' differences on students. They suggest a more appropriate term to use is "institutional performance gaps." Institutional performance gaps are shifting the ownership away from students and toward the educational settings where student groups are embedded. Others suggest using the words like "success gaps" and "achievement gaps" to highlight differences in educational outcomes by examining inequitable resources experienced by students (O'Hara, Munk, Reynolds, & Collins, 2021).

Throughout the remainder of the paper, I will use the term "success gaps" rather than "equity gaps." That does not mean I am excluding equity from the conversation; instead, I will be placing success gaps within the context of equity. To eliminate success gaps that exist in society, we must use the power of longitudinal data to resolve inequitable policies, practices, resources, and opportunities that exist in our community.

**Their goals are to strengthen agency-wide data governance, build human capacity to leverage data, advance the strategic use of data, and improve data access, transparency, and privacy.**

## **LONGITUDINAL DATA NEEDED TO CLOSE SUCCESS GAPS**

We are approaching 20 years since the federal government first awarded states competitive grants to implement longitudinal data systems. Within that time, the federal government's investment to create and enhance SLDSs is getting close to \$1 billion. In 2018, the Department of Education was charged to be stewards of data to "improve the collection, analysis, and use of high-quality data and evidence" through the passage and enforcement of the Foundations for Evidence-Based Policymaking Act of 2018 (Fortelny & Soldner, 2021). It is exciting to see the evolution of grant requirements from creating data linkages to data actions. However, additional work must be done to identify data that will inform and close success gaps.

Based on the Foundations for Evidence-Based Policymaking Act and the Federal Data Strategy, in 2020, the Department of Education released its data strategy (U.S. Department of Education, 2020). Their goals are to: 1) strengthen agency-wide data governance, 2) build human capacity to leverage data, 3) advance the strategic use of data, and 4) improve data access, transparency, and privacy. This act and

other actions in the Department can significantly impact how students succeed through the K-20 to workforce pipeline. However, within the 23-page Federal Data Strategy report, the Department of Education never mentions equity, equitable outcomes, or success gaps. That is problematic because we must intertwine equity and equity-mindedness into strategic plans, goal settings, data collections, research agendas, and evaluation plans to improve success gaps and prevent inequitable allocation of resources (Bensimon, Rueda, Dowd, & Harris III, 2007).

What types of longitudinal data are needed to close success gaps? That is such a complex question to answer. However, part of the answer to this is not about collecting as much data as possible so that we can achieve a “big data” status but instead collecting the right types of data needed for positive change (Busteed, 2016) and pushing the states to ask the right types of questions and use cases. Two frameworks/models have guided my perspective on identifying longitudinal data needed to close success gaps—the Whole School, Whole Community, Whole Child (WSCC) Model developed by the Centers for Disease Control and Prevention (ASCD & CDC, 2007) and the Postsecondary Value Framework (Figure 1) developed by the Institute for Higher Education Policy (IHEP) and Bill and Melinda Gates Foundation (BMGF) (IHEP & BMGF, 2021).

## **WSCC MEASURES**

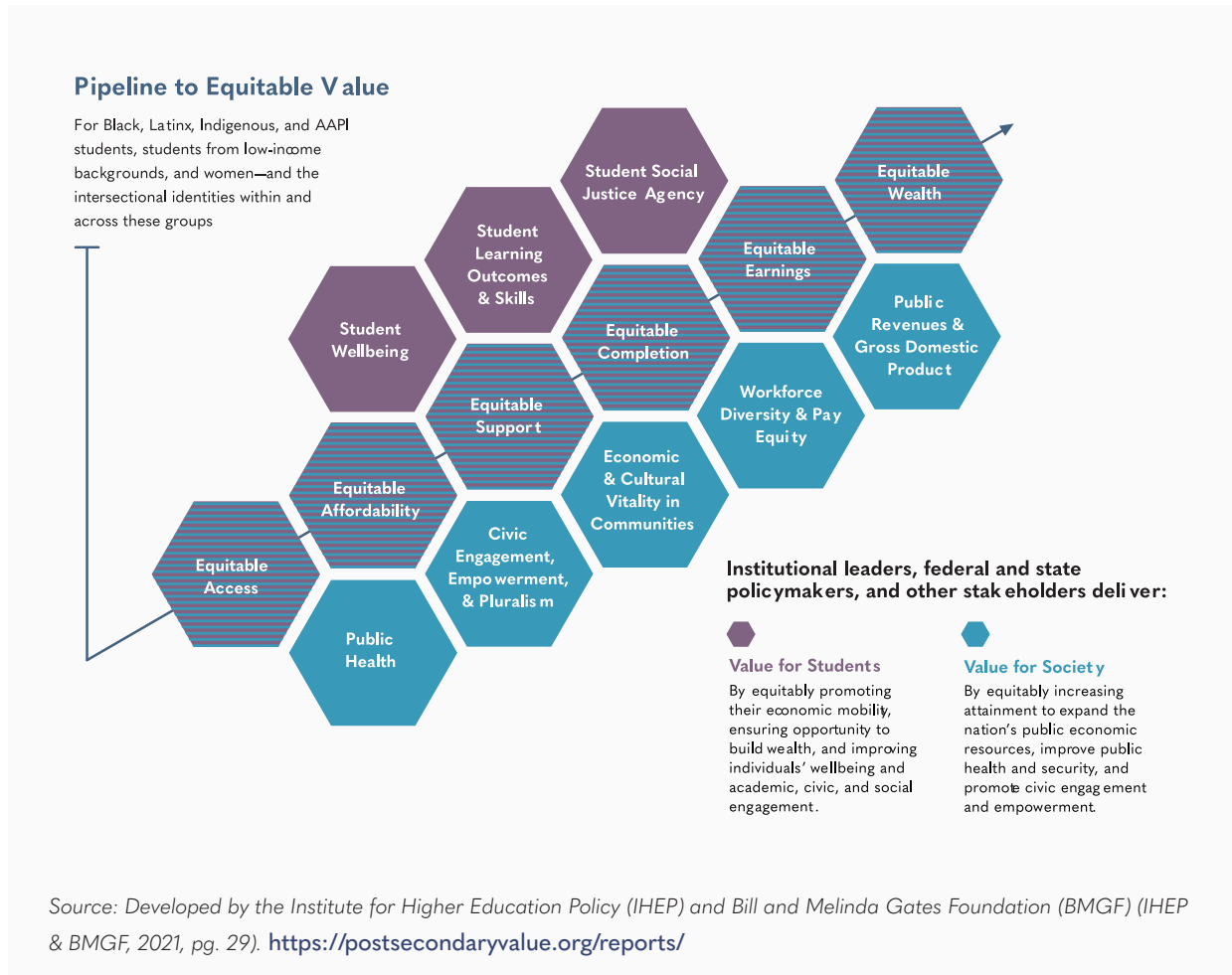
- 1. Physical education and physical activity**
- 2. Nutrition environment and services**
- 3. Health education**
- 4. Social and emotional climate**
- 5. Physical environment**
- 6. Health services**
- 7. Counseling, psychological and social services**
- 8. Employee wellness**
- 9. Community involvement**
- 10. Family engagement**

The WSCC Model provides a holistic approach to highlighting the students’ ecosystem (e.g., families, schools, communities, public health, and health care) of support and resources that will result in positive

health and academic achievement. The WSCC measures provide a wide range of sectors that can work together to enhance students’ physical health and cognitive development. While SLDSs might not have the resources to achieve such a comprehensive approach, some SLDSs have already begun linking these data. For example, Rhode Island’s Statewide Longitudinal Data System (R.I. DataHUB) has created a holistic, longitudinal data system with more than 11 partnering agencies with more than 30 years of data. The partners in this initiative comprise several organizations, including Rhode Island’s Department of Education, Office of the Postsecondary Commissioner, Department of Labor and Training, the Governor’s Workforce Board, Department of Children, Youth and Families, Department of Health, Secretary of State, Housing Resources Commission, College Crusade (which is a comprehensive college readiness program), City of Providence, and the City of Central Falls. These robust datasets enable agencies to work together to solve complex problems. Moreover, these data allow for creating data narratives (e.g., education and workforce outcomes for young mothers) that are publicly accessible (<https://datasparkri.org/young-mothers-in-ri>). These reports provide a unique look at specific groups of individuals who need specialized resources to succeed while pursuing their education aspirations resulting in finding a job.

The Postsecondary Value Framework (PVF) recognizes the value of education in benefiting students and society. The framework identifies an equitable value pipeline for Black, Hispanic, Indigenous, Asian American/Pacific Islanders (AAPI), students from low-income backgrounds, and women, as well as the intersectional identities within and across these groups. The framework allows for examining equitable access, equitable affordability, equitable support, equitable completion, equitable earnings, and equitable wealth. This pipeline benefits both students and society. The framework also recognizes the value of education and its impacts on individuals (e.g., student well-being, student learning outcomes and skills, student social justice agency) and society (e.g., public health, civic engagement, economic and cultural vitality, workforce diversity and pay equity, and public revenues and gross domestic product). Based on the WSCC Model and

**FIGURE 1:**  
**The Postsecondary Value Framework**



PVF and the review of the current status of SLDS, I will provide a list of possible longitudinal data items and data actions needed to close success gaps.

## DATA ITEM OR DATA ACTION RECOMMENDATIONS

### Student Demographics

**Data Item/Action 1:** Establish a recommended list of operationalized defined (i.e., when appropriate by using the Common Education Data Standards) student demographics linked to all state outcome measures and educational and workforce milestones.

**Data Definition:** Student demographics would include: race/ethnicity, gender (e.g., male, female, and non-binary), intersectionality of race/ethnicity and

gender, family income status by year (e.g., K-12 Free/reduced lunch; Postsecondary-Pell status: Pell ever, Pell at entry), dependency status (i.e., can the student claim financial independence from parent or guardian by year of enrollment, people with disabilities status, first generation status, students who are parents, multilingual learner, student credential status (e.g., high school diploma, certificate, associate's, bachelor's, and graduate degree) and geographical location (e.g., region of state, metropolitan area, county, city/town, and U.S. Census tract).

**Data Strategy:** Student demographic information can be either static or dynamic (i.e., changing over time). It is crucial to operationalize and capture these data every year and not have the expectation that demographic data are fixed. When reporting

race/ethnicity, it is recommended not to use Underrepresented Minority Status (URM) but instead, use the race or ethnicity reported by students. However, there needs to be intentionality when using race and ethnicity categories and we need to go beyond the federal definitions and look at the complexity of two or more races and Hispanic categories. Certain race/ethnicity groups can be possibly masked or hidden when using federal or state race/ethnicity categories. For example, students who report both Hispanic and Asian American will be categorized as Hispanic. When disaggregating data and using an intersectional approach, there can be tension between a person's anonymity (i.e., remaining FERPA compliant) versus a person's authenticity. Protecting students' identities is critical, but allowing individuals who need to see the data to enhance policy and practice is just as important. To close success gaps, we must be transparent when linking student demographics with education and workforce outcomes and do our best to provide disaggregated metrics.

### **Resource Equity**

**Data Item/Action 2:** Establish a standardized measure of resource equity within the K-12 sector.

**Value Proposition:** Resource equity is a multidimensional construct providing direct and indirect resources and opportunities that can impact students' educational experiences (Alliance for Resource Equity, 2022). Resource equity consists of 10 dimensions within the K-12 sector: school funding, teaching quality and diversity, school leadership quality and diversity, empowering rigorous content, instructional time and attention, positive and inviting school climate, student supports and intervention, high-quality learning, learning-ready facilities, and diverse classrooms and schools. These measures can be a powerful way to identify resources needed to close the success gap within K-12. For more detailed descriptions and to operationalize the definition of each measure and a diagnostic tool developed by Alliance Education Resource Equity, please refer to the following website:

<https://www.educationresourceequity.org>.

**Data Strategy:** SLDSs should conduct a landscape analysis to determine if any resource equity dimensions are accounted for in their current SLDS data.

Strategies should be developed to capture resource equity data accurately. When analyzing such data, create an analytical approach to select a suitable unit of analysis (e.g., student, school, district, region, state). Resource equity should be linked with student outcomes and educational milestones at the student level and disaggregated by student demographics to determine success gaps. Conversely, student outcomes or milestones should be analyzed by resource equity to determine which dimensions of resource equity play a role in student success. Resource equity measures should be tracked longitudinally to determine short-term and long-term impacts on student outcomes.

### **Equitable Earnings by Educational Credential**

**Data Item/Action 3:** Establish equitable earnings metrics and thresholds by incorporating the Postsecondary Value Framework into the SLDSs when examining economic success gaps with K20-W data.

**Value Proposition:** The Postsecondary Value Framework established a series of economic return thresholds that assist in identifying economic success gaps once students exit their postsecondary education and enter the workforce (Figure 2) (IHEP & BMGF, 2021, pg. 14). By linking the postsecondary education data with workforce earnings data, you can begin to examine earnings differences (i.e., success gaps) that exist by student demographics (e.g., race/ethnicity, gender, and family income). Students' earnings outcomes are placed in context using a series of thresholds. Based on data limitations, only Threshold 0: Minimum Economic Return, Threshold 1: Earning Premium, Threshold 2: Earnings Parity, and Threshold 3: Economic Mobility can be measured using SLDS postsecondary to workforce data linkages. Threshold 0 measures whether students earn at least as much as a high school student plus enough to recoup their student investment within 10 years. Threshold 1 signals where students make at least the median earnings in their field of study after graduation. Threshold 2 uses earnings data to determine if students reach earnings amounts that compare to more advantaged peers (White people, men, and high-income students). Threshold 3 provides a social mobility threshold to identify whether students reach earnings outcomes that will place them in the fourth income quintile, regardless of their field of study. Threshold 4: Economic Security and

**FIGURE 2:**  
**Measuring Economic Returns Via Thresholds**

Threshold	
0	<b>Minimum Economic Return:</b> A student meets this threshold if they earn at least as much as a high school graduate plus enough to recoup their total net price plus interest within ten years.
1	<b>Earnings Premium:</b> A student meets this threshold if they reach at least median earnings in their field of study (or, if field of study data is unavailable, the median earnings for the institution's predominant degree type). <sup>1</sup>
2	<b>Earnings Parity:</b> This threshold measures whether students of color, students from low-income backgrounds, and women reach the median earnings of their systemically more advantaged peers (White students, high-income students, or men). <sup>2</sup>
3	<b>Economic Mobility:</b> This threshold measures whether students reach the level of earnings needed to enter the fourth (60th to 80th percentile) income quintile, regardless of field of study.
4	<b>Economic Security:</b> While sufficient earnings can create a stable life, wealth is key to building the type of security needed to withstand life's financial shocks. This threshold therefore measures whether students reach median levels of wealth.
5	<b>Wealth Parity:</b> Mirroring the earnings parity threshold, this threshold measures whether students of color, students from low-income backgrounds, and women reach the level of wealth attained by their more privileged White, high-income, or male peers.

Source: *The Postsecondary Value Framework established a series of economic return thresholds that assist in identifying economic success gaps once students exit their postsecondary education and enter the workforce.* (IHEP & BMGF, 2021, pg. 40). <https://postsecondaryvalue.org/reports/>

Threshold 5: Wealth Parity can be viewed as aspirational due to the complexity of measuring these thresholds. The University of Texas System initially assisted IHEP in piloting the framework based on their robust data. Currently, IHEP is working with three states (Arkansas, Indiana, and Kentucky) to implement the framework. Understanding the value of a credential and how value differs by race/ethnicity, gender, and family income level is critical. Please visit the Postsecondary Value Commission website for more information: (<https://postsecondaryvalue.org/>)

**Data Strategy:** Using the PVF thresholds can quickly identify the success gaps that exist for students of color, women, and students from low-income families. The first strategy would be to conduct a landscape analysis to determine if the SLDS has the appropriate data to perform the Threshold analysis. Second, develop a data analytic strategy on which student cohorts (e.g., year of entry and completion status) should be included in the research. Lastly, create a series of dashboards that will assist in describing the success gaps that exist by completion status and program of study.

### Data-Sharing Agreements Road Map

**Data Item/Action 4:** Create holistic data by establishing a data-sharing agreement road map to pursue data collaborations with state and local agencies, and connect longitudinal data produced by public and private companies.

**Value Proposition:** The WSCC model and PVF provide the framework to explore various types of data that will help identify why success gaps happen and how we can resolve them. Based on the IES Survey and SHEEO review of current SLDSs data-sharing agreements, the following data sources are grouped into three categories: baseline (standard expectation for all SLDSs), intermediate (data collaborations beyond the baseline with different state agencies), and aspirational (collaborations beyond state agencies).

**Baseline:** Functional (i.e., data are linked and updated each year) data collaboration with the areas of early childhood, K-12 teacher, postsecondary, workforce, and Perkins CTE.

**Intermediate:** Functional data collaborations with other state agencies—Department of Social Services, Department of Child Nutrition and Wellness, School Finance, Department of Health and Family Services, Department of Juvenile Services, State Department of Labor (e.g., unemployment insurance wage records), and Department of Mental Health and Addiction Services. Collaborations with federal agencies (e.g., U.S. Census Bureau: American Community Survey, U.S. Census Bureau Longitudinal Employer-Household Dynamics) that provide private and publicly available data.

**Aspirational:** Functional data collaborations with public and private companies (e.g., Google, Microsoft, LinkedIn Learning, Coursera, Udemy, and Udacity) that provide non-credit-bearing courses/credentials that are not on students' transcripts. Data collaborations with public and private companies (e.g., Indeed, Lightcast, and Google Careers) that source online job search engines or gather a collection of job posting data.

**Data Strategy:** It is essential to create a data road map and strive to capture data on individuals' cognitive, health, and behavior, family and community contextual factors, and workforce needs. These dynamic data will assist in pinpointing areas where policy improvements are needed to close success gaps in education, postsecondary, and workforce sectors.

### **Data Agency**

**Data Item/Action 5:** Enhance data agency for all SLDSs stakeholders.

**Value Proposition:** Data agency involves the ability to access and create utility (i.e., data literacy) from data. Expanding on data access, do students and workers, educational professionals, policymakers, and community members depend on others to retrieve data? Do these groups have access to technologies needed to aggregate data, create reports, and confirm assumptions? Based on utility, do these groups have the skills to conduct statistical analyses and determine where data are statistically significant? Do these groups feel empowered to

make critical data-based decisions? High levels of data agency will positively impact the ability to use data to identify success gaps and determine strategies to close them. Do these groups have access to detailed data to determine if programs, practices, and policies impact success gaps? When done right, data agency means the data collected for SLDSs are actively utilized to drive meaningful change and improvement.

**Data Strategy:** Several data agency strategies can be used to close success gaps. Specifically, data agency often begins with simple shortcuts that facilitate problem-solving, probability judgments, and storytelling (e.g., visualizations and dashboards). However, it can quickly progress to more complex algorithms and full-on automation. One strategy is to establish interactive dashboards and statistical tools for specific personas (e.g., educational professionals and administrators, policymakers, institutional research professionals, students and parents, teachers/faculty, program directors, career counselors, academic advisors, and community members). Each persona will have their own experiences using and interpreting data from dashboards. Always keep in mind your audience when developing internal and external dashboards. You can create the most impressive and creative dashboards, but it isn't beneficial if it does not resonate with the audience. Once dashboards have been made, it is helpful to create online training modules to educate the potential audience on how to use the dashboard. Creating one-page data narratives can help facilitate learning new data and dashboards for stakeholders. Lastly, to close success gaps, it is beneficial to consider developing the following types of equitable dashboards using SLDS data: growth measures (identify short- and long-term changes in student learning), student pathways (tracking students during each education and workforce transition), and resource equity (tracking resources and opportunities through K-12 to postsecondary to workforce). Once again, all dashboards mentioned should be disaggregated by student demographics to identify success gaps.





## CONCLUSION

Closing success gaps by race/ethnicity, gender, family income, and other student characteristics will not happen without data-informed funding, policy, and practice. Access to high-quality longitudinal data can create a barrier preventing positive changes to the K-12, postsecondary, and workforce ecosystems. There are specific examples of states and higher education institutions in the United States that are leading the way by being intentional in the following ways:

1. **Formulating the right questions to ask and answer.**
2. **Embedding strategic goals centered around equity.**
3. **Measuring and collecting accurate, meaningful, and timely data.**
4. **Displaying data in informative ways that resonate with multiple audiences.**
5. **Creating data agency allowing for individuals to create action from the data.**

Georgia State University is one of the prime examples of how a higher education institution was able to close success gaps by race/ethnicity and family economic status. However, it did happen overnight. It took determination and a commitment from Georgia State University leadership and staff to ensure that equitable resources allowed students to thrive, thus closing success gaps that had existed for decades.

At the state level, states like Indiana, Tennessee, and Texas are making strides toward closing success gaps using SLD data by:

1. **Establishing state educational attainment goals disaggregated by student characteristics (e.g., race/ethnicity).**
2. **Producing data dashboards to highlight success gaps that exist in their states.**
3. **Creating an ecosystem of shared responsibility where states, higher education institutions, and students can all contribute to establishing equitable opportunities for students to complete a credential of value that benefits students and employers.**

We all have a part to play in ensuring our long-standing compact between individuals and education stays intact, particularly for students of color, women, and students from low-income backgrounds to experience economic prosperity and social mobility in our country. We will not achieve this goal without the use of data (e.g., SLDs) to guide us in the right direction.

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# 06

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## Ensuring Instructional Quality with Increasing Reliance on Non-Tenure-Track Faculty

BY: DI XU

**ABSTRACT:** Except for Senator Bernie Sanders' College for All Act, federal-state partnership proposals have not addressed minimum standards for educational quality as a requirement to receive new federal funding. This paper summarizes the evidence based on the effects that precarious/contingent and part-time faculty utilization can have on student outcomes and experiences, as well as faculty well-being. Recognizing that significant new federal funding and increased enrollment could further accelerate use of such faculty, the paper explores the feasibility of including provisions aimed at preventing that, such as establishing thresholds for overall utilization of part-time employment, establishing minimum standards for contract length for teachers as well as pay and benefits, and other institutional resources and policies that need to be in place to ensure educational quality.



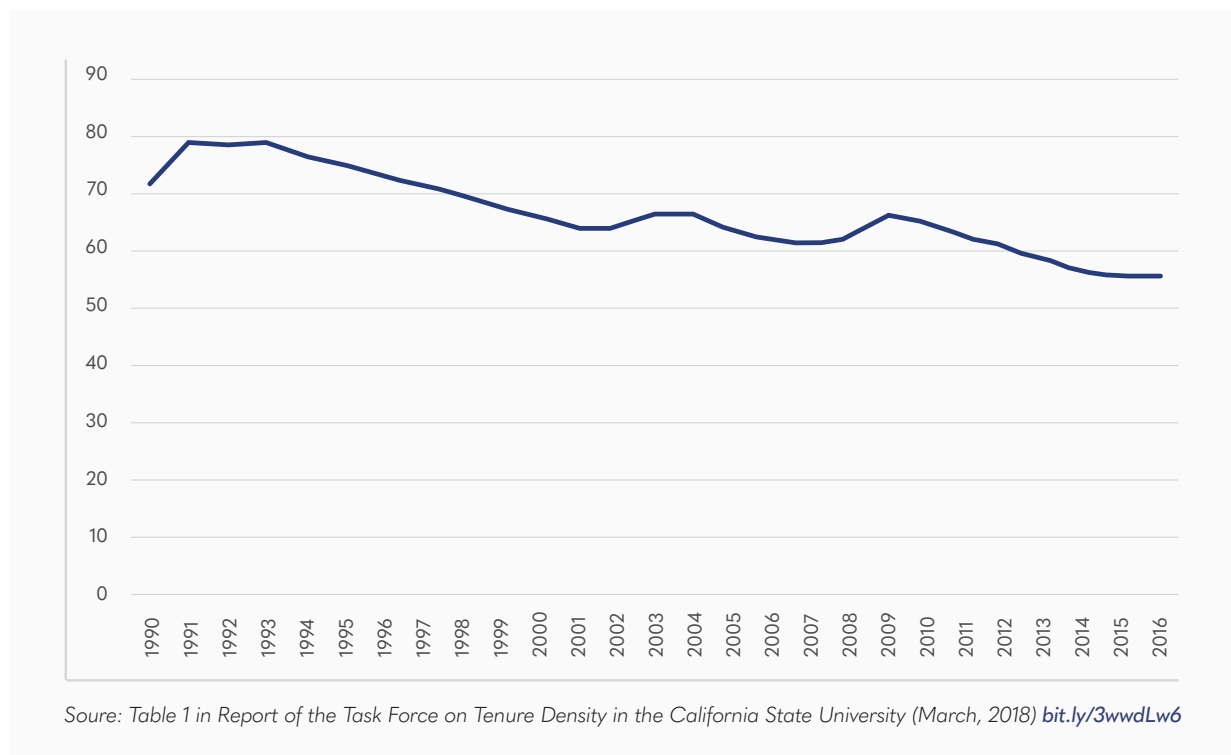
## THE GROWING RELIANCE ON NON-TENURE-TRACK FACULTY IN PUBLIC HIGHER EDUCATION INSTITUTIONS

In the past few decades, one of the most pronounced trends in US higher education has been a steady shift away from the tenure system and toward increasing reliance on non-tenure-track faculty working under precarious employment, which is often referred to as a “contingency movement” (Hearn & Burns, 2021; Kezar, 2013). Analysis of data from the U.S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS) in 2016 indicates that around 73 percent of faculty are hired in non-tenure-track positions (AAUP, 2018). In addition, the reliance on non-tenure-track faculty varies substantially by types of institutions, where non-tenure-track faculty are more heavily used at two-year colleges: in 2016, tenure-track positions made up less than 20 percent of faculty positions at two-year institutions. Due to the financial constraint and fluctuating enrollment, some community colleges depend on non-tenure-track faculty to function or even survive (Hearn & Burns, 2021).

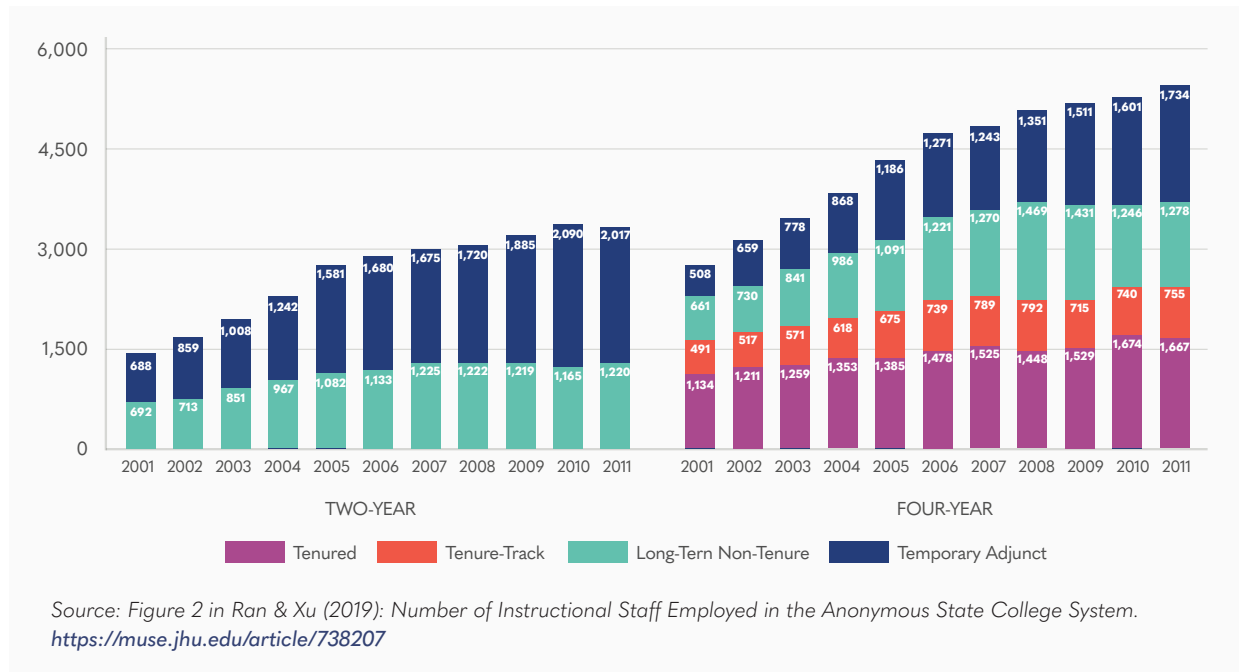
The national trends of increasing reliance on non-tenure-track faculty are also echoed in multiple state reports. For example, a 2018 report from the California State University (CSU) Office of the Chancellor explicitly recognized the threat posed by the steady decline in tenure density at CSU. According to the report, the proportion of faculty on the tenure-track declined from above 70 percent in 1990 to around 55 percent in 2016. The ratio of students to tenure-track faculty also declined from 34:1 in 2007 to approximately 40:1, implying that students have decreasing access to and interaction with tenure-track faculty who are responsible for shared governance regarding student enrollment, advising, and curriculum development.

The heavy reliance on non-tenure-track faculty seems to be particularly worrisome at two-year institutions. Based on data from an anonymous state, Ran & Xu (2019) described the changes in the distributions of different types of instructors at the state’s two-year and four-year institutions over 10 years between 2001 and 2011 (Figure 2, Xu & Ran, 2019). Their calculation

**TABLE 1:**  
**Report of the Task Force on Tensure Density in the California State University**



**FIGURE 2:**  
**Number of Instructional Staff Employed in the Anonymous State College System**



reveals a shockingly heavy reliance on non-tenure-track faculty among two-year institutions in this state, where all of the two-year institutions except for one exclusively relied on non-tenure-track faculty. At four-year institutions, the proportion of tenure-track faculty shrank from 58 percent in 2001 to 45 percent in 2011. Moreover, it seems that non-tenure-track faculty hired through temporary appointments (i.e., contracts that are less than one year; referred to as “temporary adjuncts”) instead of long-term employment (i.e., more stable employment contracts, which are typically renewed every two to three years; referred to as “long-term non-tenure-track faculty”) increased especially fast at both settings.

A number of factors have contributed to the decline of tenure in higher education. Above all, financial stress due to state funding decline is an important driving force (Kelchen, 2018). As funding for higher education becomes more scarce, institutions are constantly under pressure to find ways to reduce expenses. Faced with budget cuts, institutions are less likely to invest in the long-term security of tenure-track positions and increasingly rely on hiring non-tenure-track or part-time faculty as a cost-saving strategy. The financial need in

order to maintain a decent tenure density was depicted in detail in the 2018 report from the CSU Office of the Chancellor. The report explicitly points out that the funding required to improve tenure density must be a function of the maintenance funding necessary to replace departing tenure-track faculty, plus additional funding needed to increase tenure density. Their cost analysis suggests that in order to increase tenure density by one percent per year at CSU, an additional \$100 million in permanent funding would be needed in the first year, with ongoing increase in permanent funding each year thereafter until the system reaches the desired tenure density. Yet, while the California Legislature passed ACR 73 in 2001 to launch a plan to increase tenure density to 75 percent, the plan was never fully realized due to unsuccessful requests of funding.

In addition to financial constraints, the declining tenure density also reflects the ongoing decentralization of hiring decisions to departments and the need to respond to the rapidly changing market condition and demand (Kazar & Gehrke, 2014). Critics of the tenure system have argued that the tenure system can be slow to adapt to changing needs and circumstances and may not

always align with the needs and goals of students and the market. Finally, the advocacy for moving away from the tenure structure is further fueled by increased specialization of faculty roles and the demand for faculty who prioritize teaching rather than research (Bérubé & Ruth, 2015).

## **HETEROGENEOUS CONTRACTUAL ARRANGEMENTS AND WORKING CONDITIONS FOR NON-TENURE-TRACK APPOINTMENTS**

In response to the growing number of non-tenure-track faculty in higher education institutions, a number of studies have used college administrative data and rigorous causal inference methods to examine how the shift to contingency may influence student academic outcomes (e.g., Bettinger and Long 2010; Carrell and West 2010; Chen, Hansen, & Lowe, 2021; Figlio, Schapiro, and Soter, 2015; Hoffmann and Oreopoulos, 2009; Xu, 2019; Xu & Ran, 2019; Xu & Solanki, 2020; Zhu, 2021), and the results are mixed. One challenge to reach any consensus regarding the academic effects of the shift to contingency lies in the vast variations in the specific contractual arrangements and working conditions among faculty hired into non-tenure-track positions both within and across institutions. At community colleges, for example, AAUP's analysis of the federal data indicates that the length of the contract for full-time non-tenure-track faculty ranges widely between less than year to multiyear or indefinite contracts (AAUP, 2018).<sup>1</sup> In addition to contract length, many non-tenure-track positions are on a part-time basis. For example, using state college administrative data, (Xu & Ran, 2019) reported that non-tenure-track faculty could be hired through either part-time or full-time employment, despite the length of the contract, although part-time employment was much more prevalent among those hired through temporary contracts.<sup>2</sup>

Contractual differences can result in drastic variations in both working conditions and compensation for non-tenure-track faculty. According to (Xu & Ran, 2019), the

median annual compensation of temporary adjuncts from college teaching positions is around one third as much as that of long-term non-tenure faculty (\$7,726 versus \$29,571 at two-year colleges, and \$10,944 versus \$37,749 at four-year colleges), which seems to be due to both lower teaching load and lower pay per credit. Temporary adjuncts are also more likely to be hired through part-time employment and are subject to higher attrition rates, where the one-year turnover rate is three times higher than non-tenure-track faculty hired in longer-term employment. These working conditions impose greater challenges for temporary adjuncts in maintaining instructional quality, mirroring concerns that have been cited in literature about temporary labor hired in other industries (for example, Lewis 1998; McNerney 1995).

**Temporary adjuncts are also more likely to be hired through part-time employment and are subject to higher attrition rates, where the one-year turnover rate is three times higher than non-tenure-track faculty hired in longer-term employment.**

## **NON-TENURE-TRACK FACULTY AND STUDENT OUTCOMES**

The declining number of tenure-track faculty in higher education has attracted criticism from the public. Research consistently suggests that the commitment and engagement of instructors with their institution and students is important for the education process (Day, 2004; Elliott & Crosswell, 2001; Fried, 1995; Nias,

<sup>1</sup> Specifically, the report indicates that the majority of the full-time non-tenure-track faculty at community colleges are on annual contracts (63 percent); 28 percent have multiyear or indefinite contracts, and 8 percent have temporary contracts lasting less than a year (AAUP, 2018).

<sup>2</sup> The proportions of non-tenure-track faculty hired through part-time employment were 69 percent at two-year institutions and 53 percent at four-year institutions respectively. Part-time employment is much more prevalent among temporary adjuncts (78% at two-year institutions and 70% at four-year colleges) than long-term non-tenure-track faculty (36% at two-year institutions and 31% at four-year colleges).

1996). The increasing reliance on non-tenure-track faculty has been criticized for causing problems such as insufficient engagement with the department, lack of experience and professional training, limited availability to students, inadequate preparation time for courses, and the possibility of teaching at multiple institutions (Benjamin, 2002, 2003; Schuetz, 2002; Umbach, 2007). In addition, studies conducted at two-year institutions indicate that many non-tenure-track faculty, especially those hired through part-time appointment often receive particularly low compensation, minimal benefits, and lack job security (Adamowicz, 2007; Friedlander, 1980; Jacoby, 2005; Schmidt, 2008), who are found to hold “scant loyalty for the institution and an increasing sense of frustration with their circumstances” (Brewster, 2000, p. 68). These issues may negatively impact the quality of instruction and the interactions between faculty and students. Moreover, tenure-track faculty are essential for shared governance of an institution. In addition to research and teaching, they are also responsible for student enrollment, curriculum and program development, professional development, administrative duties, serving on search committees and planning groups, and participating in campus life. These roles are important for the overall functioning and success of the university, as well as for student engagement and learning.

A number of studies empirically assessed the relationship between reliance on non-tenure-track faculty and student outcomes by exploiting institution-level variations in use of non-tenure-track faculty. These studies generally identified negative associations between higher shares of non-tenure-track faculty and average college graduation rates (e.g., Eagan & Jaeger, 2009; Ehrenberg & Zhang, 2005; Jaeger & Eagan, 2009; Jacoby, 2006). Yet, these estimates might be subject to unobserved institution-level differences that are associated with an institution’s reliance on non-tenure-track faculty as well as its average graduation rates.

A line of more recent research used college administrative data to explore whether students learn differently when taking a specific course with different types of faculty (e.g., Bettinger & Long, 2010; Carrell & West, 2010; Figlio et al., 2015; Hoffmann &

Oreopoulos, 2009; Xu & Ran, 2019; Xu, 2019; Zhu, 2021). However, one methodological challenge to delivering a causal estimate is self-selection. That is, college students select courses and professors based on individual preferences, which makes it difficult to separate the causal effects of instruction quality from the aptitudes and attitudes of students. The current literature of quasi-experimental designs has mainly employed two identification strategies to address student self-selection: student fixed effects models that control for biases that are fixed at the student level (e.g., Figlio et al., 2015), and an instrumental variable strategy that takes advantages of the exogenous fluctuations in faculty composition in a department (e.g., Bettinger & Long, 2010).

**Studies generally found that students tend to receive higher grades when taking the same course with a non-tenure-track faculty, and the effect size is particularly pronounced among temporary adjuncts.**

**RAN & XU, 2019; XU, 2019; CHEN ET AL., 2021**

Given the substantial heterogeneity in contractual arrangements for non-tenure-track positions, it is not surprising that the findings from this line of work vary depending on which specific type of non-tenure-track faculty is examined and the institutional environment. The results also vary depending on the specific outcome metrics examined, which are summarized briefly below.

**Concurrent course persistence and performance.**

Studies generally found that students tend to receive higher grades when taking the same course with a non-tenure-track faculty, and the effect size is particularly pronounced among temporary adjuncts (Xu & Ran, 2019; Xu, 2019; Chen et al., 2021). For example, Chen





et al. (2021) compared student grades between part-time and full-time faculty at a mid-sized, four-year public university and identified a 0.2–0.3 grade-point increase in the average GPA when students took the same course with a part-time instructor. On a 0–4 grading scale, a 0.3 grade-point increase is similar to one letter grade higher, such as from B+ to A-. Interestingly, their subsequent analysis indicated that when instructors’ contractual status changed from part time to full time, grades assigned by the instructor would be deflated, suggesting that the higher grades observed among part-time instructors are likely to be due to grading leniency instead of better student learning outcomes, thus raising concerns about using course grade or student evaluations as the sole criteria to assess instructional quality.

#### **Subsequent course enrollment and performance.**

In view of the potential bias introduced by focusing on concurrent course grades, researchers looked beyond current course outcomes and incorporated subsequent course enrollment and performance to understand the impact of non-tenure-track on students’ interest in a field and preparation for subsequent learning. Yet, studies conducted in different types of institutions often result in contradictory conclusions. The strongest support for the optimism around non-tenure-track faculty comes from a study conducted by Figlio et al. (2015) at Northwestern University, a well-resourced private institution where the majority of non-tenure-track faculty had a longer-term relationship with the

university. Compared with tenure-track faculty, taking one’s initial course in a subject area with a non-tenure-track faculty had positive impacts on student subsequent interest (measured by enrolling in another course in the same subject area) and performance in the subsequent course. Another set of studies (e.g., Bettinger and Long, 2010; Hoffmann & Oreopoulos, 2009; Xu & Solanki, 2020) were conducted at selective public institutions, and generally identified small and often nonsignificant differences in students’ dropout, subsequent grade, and course-selection outcomes between tenure-track and non-tenure-track faculty.

In contrast, studies conducted in open-access two-year or less selective public four-year institutions generally identified a negative association between non-tenure-track faculty and student subsequent course enrollment and performance (e.g., Ran & Sanders, 2020; Xu & Ran, 2019; Xu, 2019). It is worth noting that these studies showed a much heavier use of temporary part-time appointments for non-tenure-track positions, especially at two-year institutions, resulting in strong exposure to part-time temporary adjuncts among students. In the state examined by (Xu & Ran, 2019), 75 percent of all faculty in two-year colleges and 39 percent in four-year colleges were temporary adjuncts hired through contracts shorter than one year. With non-tenure-track faculty hired through longer-term contracts as the reference group, temporary adjuncts had a negative impact on students’ probability of enrolling and completing the next course in the same



field of study by approximately 2 percentage points, while tenure-track/tenured faculty had a positive impact by 1 percentage point. In other words, while both types of non-tenure-track faculty were associated with less desirable subsequent outcomes, students were subject to greater levels of negative influence when taking courses with temporary adjuncts.

**75% of all faculty in two-year colleges and 39% in four-year colleges were temporary adjuncts hired through contracts shorter than one year.**

**XU & RAN, 2019**

#### **College persistence and credit accumulation.**

In view of the negative impact of non-tenure-track faculty, especially temporary adjuncts on students' subsequent interest and performance, some researchers raised the concern that uninspiring experiences in a course might hamper a student's subsequent persistence in college. Using data from public four-year colleges in Ohio, Bettinger and Long (2006) found that students taking an "adjunct-heavy" course schedule in their first semester are less likely to persist into their second year. Using data that differentiates between temporary and long-term

contracts among non-tenure-track faculty, (Xu & Ran, 2021), related the proportion of course credits taken with different types of instructors during a student's initial semester in college to a variety of academic outcomes. They found that a 10-percentage-point increase in the level of first-term exposure to temporary adjuncts adversely affects two-year college students' first-year persistence rates by 2 percentage points and total number of college-level credits attempted and earned subsequently by one credit. Moreover, the penalty of temporary adjuncts is particularly strong among males and racial minority students with above-median math scores prior to college enrollment. Male students who perform above average incur a 5-percentage point increase in their first-year college withdrawal rate due to a 10-percentage point increase in exposure to temporary adjunct faculty during their first term. Considering that optimizing college retention is imperative when it comes to economic opportunity for disadvantaged students, the negative impact of temporary adjuncts on two-year students' college persistence and credit accumulation is especially worrisome.

#### **Labor market performance.**

One argument for hiring non-tenure-track faculty is that some of them may have industry-related working experiences and thus may bring networking and internship opportunities to students, as well as imparting valuable practical skills and knowledge (e.g., Cantor, 1997; Leslie & Gappa, 1995). By linking college administrative data with unemployment insurance

earnings records, (Xu & Ran, 2021) examined this possibility empirically and identified a small and nonsignificant association between non-tenure-track faculty and student labor market outcomes.

## **STUDENTS' DIFFERENTIAL EXPOSURE TO TEMPORARY ADJUNCTS**

In view of the particularly pronounced negative impact of temporary adjuncts on student outcomes, it is important to understand what types of students are most heavily exposed to them? Given the heavier reliance on temporary adjuncts at community colleges, it is not surprising that community colleges students have substantially higher levels of exposure to adjuncts with temporary appointments than four-year students. In the state examined by (Xu & Ran, 2021), for example, two-year college students on average take 40% of their first-semester course credits with adjunct faculty hired through temporary appointments, where four out of five temporary adjuncts are hired through part-time employment. In contrast, four-year college students on average only take 18% of their first-semester course credits with temporary adjunct faculty.

Within a specific institution, prior research also reveals noticeable variations between different departments in use of temporary adjuncts. In the same study conducted by (Xu & Ran, 2021), the researchers found that in two-year colleges, non-STEM fields rely more heavily on temporary adjuncts than do STEM fields, where temporary adjuncts are most actively involved in teaching humanities. At four-year colleges, temporary adjuncts are most involved in teaching English courses and least involved in teaching science courses. Yet, it is important to note that the lower reliance on temporary adjunct faculty in STEM fields may be a consequence of limited employment pools of qualified candidates, rather than a deliberate institutional or departmental strategy. Considering that college graduates majoring in STEM-related fields typically earn higher wages than college graduates in non-STEM fields (Kinsler & Pavan, 2015), individuals with a STEM credential would face a high-opportunity cost of choosing to teach as a temporary adjunct faculty. Accordingly, in STEM and health-related fields with higher average compensation and higher returns to investment, it would be particularly

challenging to recruit and retain highly skilled adjunct instructors who are willing to be employed through temporary and precarious appointments (Xu & Ran, 2022). Indeed, drawing on a survey of chief academic officers at 347 community colleges nationwide, Charlier & Williams (2011) found that STEM-related fields reported highest unmet demand for adjunct faculty members. They also found that adjuncts were less heavily used in colleges located in rural areas than those in suburban or urban areas while rural leaders indicated higher level of unmet demand for adjunct faculty members, again suggesting that the limited employment pool in rural areas and in STEM fields could make it especially difficult to recruit and retain highly skilled adjunct instructors. This possibility was supported by empirical evidence from Xu (2019) and (Xu & Ran, 2022), who identified a particularly large negative impact of temporary adjuncts in STEM-related fields compared with non-STEM fields.

Finally, current research has also identified differences between subgroups of the student population in their exposure to temporary adjuncts at a college. For example, the results from (Xu & Ran, 2021) indicate that at community colleges, racial minority students, older students, state residents, students with lower high school GPAs, non-STEM majors, and part-time enrollees are more likely to have a heavier adjunct schedule. The heavy exposure to temporary adjuncts among male and racial minority students is particularly worrisome, given that Ran & Xu's subsequent analysis suggest that the penalty of greater exposure to temporary adjuncts is particularly larger among males and racial minority students.

## **WHAT EXPLAINS STUDENT PERFORMANCE GAPS ASSOCIATED WITH NON-TENURE-TRACK FACULTY**

In view of the variations in teaching effectiveness of different types of faculty, it is important to understand sources of such variation. A handful of studies compared different types of faculty in terms of their instructional approaches and interactions with students (e.g., Benjamin, 2002, 2003; Schuetz, 2002; Umbach, 2007). These studies were primarily conducted at two-year institutions and all raised concerns that reliance on part-time faculty may undermine successful student

integration and compromise learning outcomes. For example, Benjamin (2002, 2003) found that part-time faculty were less accessible to students outside of the classroom, and that exams were less rigorous and required less writing from students. Based on surveys of more than 1,500 faculty respondents from over 100 community colleges nationwide, Schuetz (2002) found that part-timers tend to “use less innovative or collaborative teaching methods, and interact less with their students, peers, and institutions”; they also tend to “express less knowledge of students’ need for or use of support services” (p. 44), suggesting that students are unlikely to receive the same quality of instruction from part-time faculty in community colleges.

In view of the differences between faculty in instructional approaches and interactions with students, a number of mechanisms have been discussed, which can be broadly put into one of two categories. The first category focused on faculty’s individual and professional characteristics, such as highest degree attained, years of teaching experiences, and professional experiences in other industries. A number of studies found noticeable differences between non-tenure-track faculty and tenure-track faculty, as well as between temporary adjuncts and long-term non-tenure faculty. For example, Ran & Xu (2019) found that compared with tenure-track or tenured faculty, non-tenure faculty are more likely to be female and less likely to have received a master’s or doctorate. Between the two types of non-tenure-track faculty, temporary adjuncts had particularly low proportions of faculty with terminal degrees. These professional characteristics may be related to an instructor’s content knowledge, which in turn, may influence student learning outcomes.

The other category of mechanisms instead focused on faculty’s working conditions, such as types of sections assigned to non-tenure-track faculty, access to institutional resources, and part-time employment status, which may affect faculty’s knowledge of the institution, capacity to engage students and, consequently, impact student academic outcomes. Indeed, a large volume of studies have consistently provided qualitative or descriptive evidence about the

challenging working conditions for non-tenure-track faculty adjunct instructors hired in temporary part-time positions, including lack of office space, inadequate orientation, limited professional training opportunities and mentoring, insufficient information on available student academic and non-academic support services, and insufficient time to prepare for the course (e.g., Eagan et al., 2015; Hoyt, 2012; Kezar, 2013; Kezar & Sam, 2013; Ran & Sanders, 2020; Schuster & Finkelstein, 2007). For example, based on faculty survey data collected from six community colleges, Ran & Sanders (2020) found that compared with full-time faculty, part-time faculty reported having significantly less knowledge about academic and non-academic supports and services available to students, which could hamper their capacity to advise and support students.

**Non-tenure-track faculty, especially temporary adjuncts, are more likely to be assigned to teaching classes with certain characteristics, including entry-level courses, classes with smaller enrollment size, online sections, and night or weekend classes.**

**RAN & SANDERS, 2020; RAN & XU, 2019**

In addition, research also indicates that non-tenure-track faculty, especially temporary adjuncts, are more likely to be assigned to teaching classes with certain characteristics, including entry-level courses, classes with smaller enrollment size, online sections, and night or weekend classes (Ran & Sanders, 2020; Ran & Xu, 2019). Some of these attributes may influence an instructor’s capacity to engage their students. For example, if an instructor primarily or exclusively teaches outside of regular business hours, it may negatively influence their ability to access campus resources, and engage with either the students or the

institution. Similarly, if an instructor only teaches entry-level courses and has limited involvement in more advanced course work and curriculum design, it may limit their capacity in broadening introductory course content to prepare students for subsequent learning. Finally, an extensive body of research has converged to the consensus that online learning is associated with unique challenges that require substantial amounts of efforts and pedagogical knowledge from the instructor to intentionally address these challenges (see Xu & Xu, 2019 for a review of this line of literature). Accordingly, insufficient professional development opportunities and limited time to prepare for a course may exacerbate the challenges non-tenure-track faculty are facing when they teach online classes.

While a number of mechanisms have been discussed in the qualitative and theoretical literature that may contribute to differential teaching effectiveness between faculty hired through different contracts, only a handful of studies directly assessed the exploratory power of these factors empirically (e.g., Ran & Sanders, 2020; Xu & Ran, 2019). Overall, three patterns emerge from these studies. First, adding observable instructor individual and employment characteristics helps explain substantial amounts of the estimated differences between different types of faculty on student academic outcomes. For example, (Xu & Ran, 2019) examined four vectors of instructor characteristics, including (i) an instructor's highest educational credential received, (ii) whether the instructor taught in multiple institutions, (iii) part-time versus full-time employment status, and (iv) industry experience. The authors found that adding these predictors explains away one quarter of the gaps between temporary adjuncts and long-term non-tenure instructors on subsequent enrollment at two-year institutions, and more than half in four-year institutions.

Second, between the two categories of factors, working conditions instead of individual characteristics seem to be the primary explanatory source of variation in faculty effectiveness. For example, based on data from six community colleges, Ran & Sanders (2021) found that contextual and institutional factors surrounding part-time employment, rather than part-time faculty members' individual traits, are more likely to be the

mediators of the associations between part-time faculty and student outcomes.

Third, among the individual and professional characteristics examined, having a master's or doctoral degree was found to be a significant predictor of instructional effectiveness at four-year institutions (Ran & Xu, 2019). As for employment conditions, part-time status tends to be a strong negative predictor of an instructor's teaching effectiveness at both two-year and four-year institutions, providing strong empirical support for the concerns around the capacity of part-time faculty in engaging students effectively (e.g., Ran & Sanders, 2020; Ran & Xu, 2019; Xu, 2019).

## POLICY IMPLICATIONS

### Recommendations for state and federal policy.

State and federal policymakers should be cognizant that as colleges increasingly move away from a tenure system and toward relying on non-tenure-track, part-time, and temporary appointments, there is a risk of compromised student performance and exacerbated equity gaps across the higher education system. Here are a few steps policymakers could take to ameliorate these gaps:

- **Set a target for tenure density and establish a stable approach to the budget to achieve the goal:**

When institutions are faced with meeting the legitimate needs with declining budgets, there is an almost inevitable move toward hiring non-tenure-track faculty to save costs. This dynamic is unlikely to change unless a clear target for tenure density is set and is explicitly included into the budget and faculty hiring process. The ideal tenure density may vary across institutions depending on multiple factors, such as the missions of the institution, characteristics of the student population, enrollment size, and the number of lower-division service courses, among others. Yet, providing guidance to help institutions set a clear target of the ideal tenure density, funding budget requests to achieve the target, and establishing a process for monitoring and reporting systems on an annual basis is necessary

to change the current trend toward overreliance on non-tenure-track faculty.

- **Implement policies to limit the use of part-time adjunct contracts:**

In view of the negative impacts of part-time temporary contracts on faculty's working conditions, experiences, and student outcomes, it is important for federal policymakers to recognize the risk associated with part-time temporary appointments and implement policies to limit the use of temporary part-time contracts for instructional faculty. Yet, from a cost perspective, the costs are likely to be higher if institutions rely more heavily on long-term contracts than temporary ones. Based on Xu & Ran's (2021) calculation, the average pay per credit is 12% to 22% lower for temporary adjuncts than long-term, non-tenure faculty, and this calculation does not take into account the additional gaps in benefits provided to faculty. Accordingly, policymakers should ensure that federal funding is provided to institutions to enable them to reduce the reliance on temporary positions and shift toward a more stable teaching force.

- **Provide funding to support faculty recruitment in rural areas and STEM fields:**

In view of the greater challenges of recruiting and keeping high-quality non-tenure-track faculty in rural areas and in STEM-related fields, policymakers should consider providing additional funding specifically allocated to rural institutions and STEM-related fields to help them create long-term teaching positions with better working conditions and competitive compensation to recruit capable candidates.

- **Strengthen federal data collection:**

The federal data currently collect information about percentage of different types of faculty at the institution level. This could be further strengthened and expanded to collect more detailed information about faculty, such as information about discipline-specific reliance on non-tenure-track faculty. Such information

used to be collected in the National Study of Postsecondary Faculty (NSOPF), which was discontinued in 2013. Resuming collection of more detailed data about faculty and linking them to student data systems will allow for long-term monitoring of faculty usage and its impact on instruction and student outcomes.

- **Establish guidance on best practices about accountability and support for faculty:**

The current literature converges to suggesting that instructional effectiveness highly depends on working conditions and institutional environment. Yet, the precise institutional practices and policies that have substantial impacts on instructional effectiveness is largely unknown. Accordingly, policymakers should identify systematic ways to collect and share evidence-based strategies and institutional practices for accountability mechanisms and support for both tenure-track and non-tenure-track faculty across a variety of institutional contexts with different levels of resources and distinct types of student population served.

### **Recommendations for institutional policy:**

- **Set an institution-specific tenure density plan and create a multi-year faculty hiring plan that addresses the target and fits within existing resource allocations:**

In developing the plan, it is critical for institutions to lobby the legislature and governor for sufficient state funding to meet the institution's faculty hiring plan.

- **Reduce use of temporary contracts and part-time employment:**

In view of the contrasts between non-tenure-track faculty hired through temporary and long-term contracts, colleges may consider limiting the number of temporary positions, especially those with part-time contracts, and instead creating more long-term, full-time positions with greater security and institutional support to stabilize and professionalize the teaching force. One way to make this shift is to develop long-term contract arrangements with instructors who are initially hired through temporary contracts but

demonstrate strong commitment to teaching. In addition to serving as a stable teaching force, teaching faculty hired through long-term contracts may also bring other benefits to an institution. For example, Bush et al. (2015) describe the potential of teaching faculty to serve as pedagogical leaders and agents of change within their respective departments.

- **Ensure access to resources and institutional engagement:**

Differential access to institutional resources and diminished engagement with the institution may hinder faculty's ability to engage and support students. To address these challenges, it requires colleges to ensure that all instructors, regardless of employment status, have ample opportunities to provide input on program goals, curriculum design, and student services. It is also desirable for institutions to connect faculty teaching similar courses and create space for faculty to work together to discuss best practices and create a community of support. In addition, Kazar (2013) also pointed out a number of concrete institutional practices that do not require the infusion of money to enact and thus can be put into place even in resource constrained environments, such as collecting sample syllabi, providing basic materials, early scheduling, consolidating teaching schedules, communicating institutional resources and policies more proactively, and administering anonymous surveys among non-tenure-track faculty to elicit policies and practices that may influence their productivity.

- **Provide professional training opportunities.**

One important way for colleges and departments to engage faculty and improve their teaching is through professional development. However, non-tenure-track faculty, especially those hired through temporary appointments often have limited access to these opportunities and even if they do, campus workshops or programs are often offered during regular working hours on

weekdays when many part-time adjuncts are not available. This requires institutions to not only allocate funding to provide professional development opportunities to all faculty and offer compensation or financial incentives for participation, but also offer those opportunities at a variety of times (such as offering some programs over the weekend) and through different delivery formats (such as creating hybrid and online programs) to expand access to these opportunities.

- **Caution against using student course evaluations or course grades alone for evaluating instructional effectiveness.**

Institutions commonly use student course evaluations and course completion rates to evaluate instructional effectiveness. While these measures provide valuable information and are convenient to collect, they are often subject to potential biases due to grading leniency and do not fully capture a student's learning gains. Accordingly, institutions need to caution against using student course evaluations or student course grades as the sole criterion for evaluating instructional effectiveness, and consider incorporating more direct measures of instructional practices through class observations conducted by peers or pedagogical experts. Institutions may also consider including additional items into student course evaluation that focus on instructional practices that are promising at engaging students and facilitate learning, such as availability and frequency of office hours, interaction with course instructors, opportunities for interacting peers, clarity of course objectives, etc.

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# 07

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## The Research Mission and College Affordability: Context and Policy Recommendations

BY: BRENDAN CANTWELL

Research universities are a vital part of the education sector in the United States.<sup>1</sup> In 2021, 41% of all full-time equivalent (FTE) enrollments were at research universities. The research sub-sector extends well beyond the most elite and well-known universities to include a wide swath of higher education institutions, including many that offer broad access and support lower-income and BIPOC students (Carnegie Classification of Institutions of Higher Education [CCIHE], 2021). Research universities offer the resource-intensive education that brings about successful student outcomes.



Increased per-student expenditure is causally associated with higher graduation rates (Deming & Wolter, 2017). In recent years, demand for and enrollment in doctoral universities increased and graduation rates have ticked up (Carrasco, 2022). Between 2018 and 2021, research universities were the only institution type that grew in both the number of institutions in the category and in total enrollments by category. While the U.S. higher education sector is shrinking overall, the research university sub-sector is growing (CCIHE, 2021). Research universities also offer more opportunities to study in remunerative majors like such as engineering and offer students a higher probability of graduating, which are two key factors for the return on investment from college (Webber, 2016). They offer students an array of experiences, including the opportunity to participate in research, that are beneficial to improving educational and social outcomes (Mayhew, et al., 2016). Beyond individual returns, research universities are community anchors. They employ large numbers of people (sometimes are the largest employer in a state), contribute to community economic resilience (Weinstein, & Yang, 2021), and stimulate regional economic vitality as well as national innovation (Owen-Smith, 2019).

**Research universities offer the resource-intensive education that brings about successful student outcomes. Increased per-student expenditure is causally associated with higher graduation rates.**

DEMING & WOLTER, 2017

The benefits of academic research come with costs, some of which are borne by students. State and federal research funding is flat, and competition for available funds is intense. As a result, universities

increasingly spend their own funds to support research. The need for additional research funding encourages institutions to seek students who can pay higher tuition prices (Jaquette, et al., 2016). The importance of addressing research is compounded when considering proposals for new federal-state funding partnerships. The federal government is the dominant force in shaping science policy, while the provision of higher education is typically understood to be the primary responsibility of the states. To the extent that these levels of government work together to support affordable and inclusive access, they should approach the problem holistically to reduce the chance of working in opposition of one another. In re-thinking the way that higher education is financed, policymakers can consider how the research mission and the goal of providing inclusive access intersect and to craft policy that recognizes that intersection and aims to preserve the research mission and its contributions to the common good while containing students' exposure to the cost of research and generally improving equity in higher education.

In this paper, I consider why the research mission is an important, if often overlooked, piece of the puzzle to securing broad-based, equitable, and affordable access to higher education. I show how the research mission has expanded over time and show how some of the costs of research are passed on to students. Finally, I offer some possible approaches to addressing the question of research in federal-state partnerships designed to lower college costs.

## **WHY DO COLLEGE ACCESS AND AFFORDABILITY POLICY REFORMS NEED TO GRAPPLE WITH THE RESEARCH MISSION?**

Successful policy design and implementation of policy to improve equity and affordability on higher education will require accurately assessing the extent and intensity of university research and

<sup>1</sup> I define research universities as CCHE's R1: Doctoral Universities – Very high research activity, R2: Doctoral Universities – High research activity, and D/PU: Doctoral/Professional Universities categories. Institutions in each of these categories have a substantial graduate education and knowledge creation mission and contribute to country's academic research enterprise.

**TABLE 1:****Public University Research Expenditures by Source, Millions \$**

SOURCE	MEDIAN	MEAN	S.D.
Total	28.0	159.6	289.8
Federal	14.1	81.2	156.7
State and Local	1.6	11.1	24.4
Institutional	8.6	44.3	78.9
Nonprofit	0.9	9.3	25.6
Industry	0.6	8.6	20.6
Other	0.2	5.1	16.2

Source: All institutional research and development expenditures search and development expenditure data from the National Science Foundation's (NSF) Higher Education Research and Development (HERD) survey. Data available from: <https://www.nsf.gov/statistics/srvyherd/#tabs-2>.

securing buy-in from key stakeholders, including the institutions that perform research, major funding agencies, and science policy advocates.<sup>2</sup> The federal government is the primary funding of academic research but significant intersectional dollars supplement the federal investment, which exposes students to research costs. Research universities are often thought of as small segment of the U.S. higher education landscape. Indeed, the super-elite, globally renown universities with outsized research operations and vast reserves of institutional wealth do comprise a tiny fraction of campuses and enrollments (Taylor & Cantwell, 2019). But framing all research universities as synonymous with the wealthiest and most selective institutions in the country is misleading. Public regional universities such as the University of Texas, El Paso and California State University at Los Angeles are research universities. In fact, there are 469 research universities in the United States in 2021 (CCHE, 2021). Research universities make up just 6% of all institutions but

enroll 26% of all undergraduate students. Research universities encompass multiple missions that are sometimes in tension with each other (Winston, 1999; Weisbrod, 2000). In addition to a primary mission of providing undergraduate education, a large portion of the U.S. higher education sector is dedicated to the creation and dissemination of knowledge through research. Because education and research are produced jointly (Leslie et al., 2012), the research mission undoubtedly influences undergraduate education, including contributing to student access and increasing institutional thrust for net tuition revenue.

Higher education is the second largest research and development (R&D) sector in the country, and the largest performer of basic research (Burke et al., 2022). The federal government is the largest funder of academic research, but institutions supplement federal and other funding sources with their own dollars to support research. In 2020, public institutions reported

<sup>2</sup> Within research active universities, presidents, provosts, research vice presidents, graduate school leaders, and the deans of research-intensive colleges will be key stakeholders to engage. The National Science Foundation, National Institutes of Health, Department of Energy, Department of Defense, and Department of Education are all major funders of academic research whose policy shape university behavior. Large non-governmental foundations such as the Gates Foundation, Lumina Foundation, and the Bloomberg Family Foundation are also active in research funding and may be active in this policy area. Science advocacy groups such as the Association of Public and Land Grant Universities (APLU), American Association of Universities (AAU), American Association for the Advancement of Science (AAAS), and the National Academies of Science and Engineering also important stakeholder groups to engage.

spending \$56.1 billion on R&D to the National Science Foundation, including \$15.5 billion from institutional coffers.<sup>3</sup> Table 1 reports median, average (mean), and standard deviation statistics on research expenditures by funding source at U.S. public universities. Half of the 345 public universities included in the NSF's Higher

research portfolio. Half of all research active public universities dedicated \$8.6 million or more in institutional funds on research, and the average university spent \$44.3 million institutional dollars on research. To put these numbers in context, research and public service currently comprises 16% of total expenditures (derived from all sources) at public four year institutions (NCES, 2022).

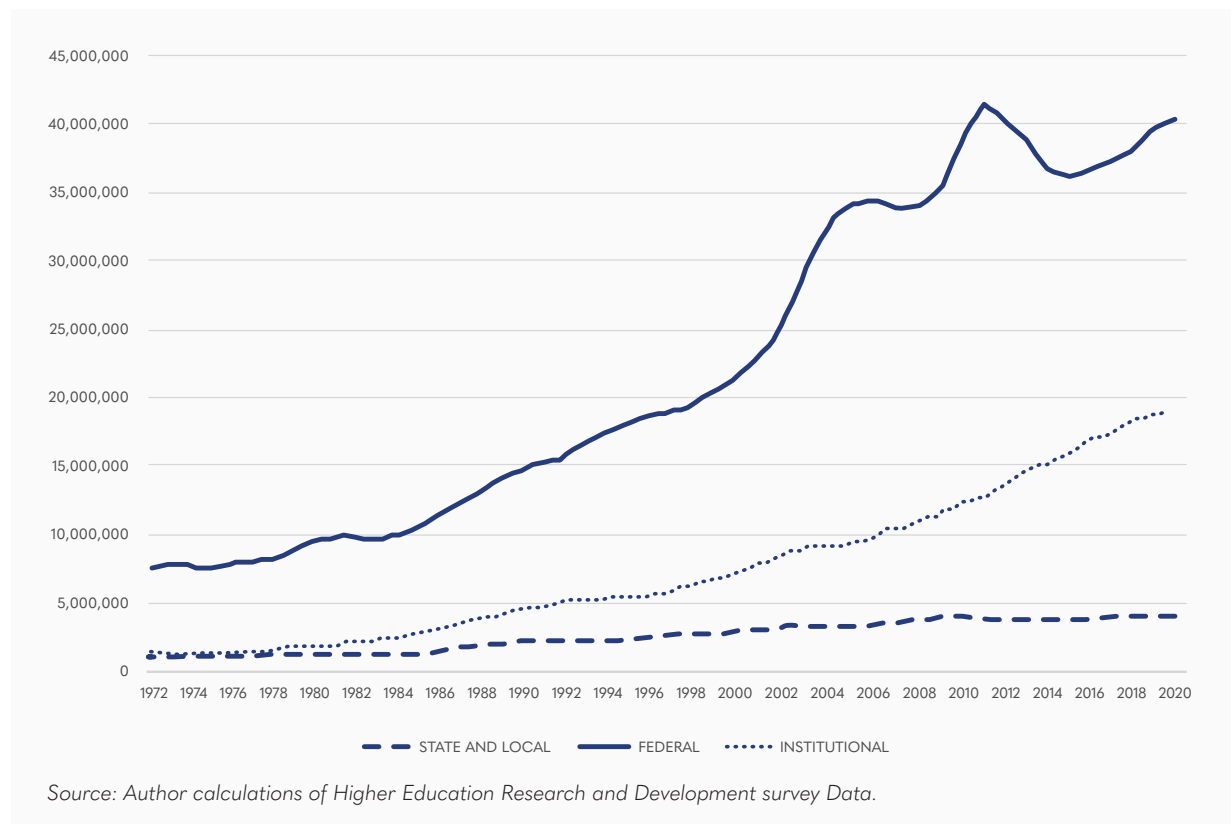
## Dozens of public research universities spent more institutional than federal money on research in 2020.

HAMILTON & NEILSON, 2021

Education Research and Development (HERD) survey report conducted \$28 million or more in research in 2020, and the average institution had a \$159.6 million

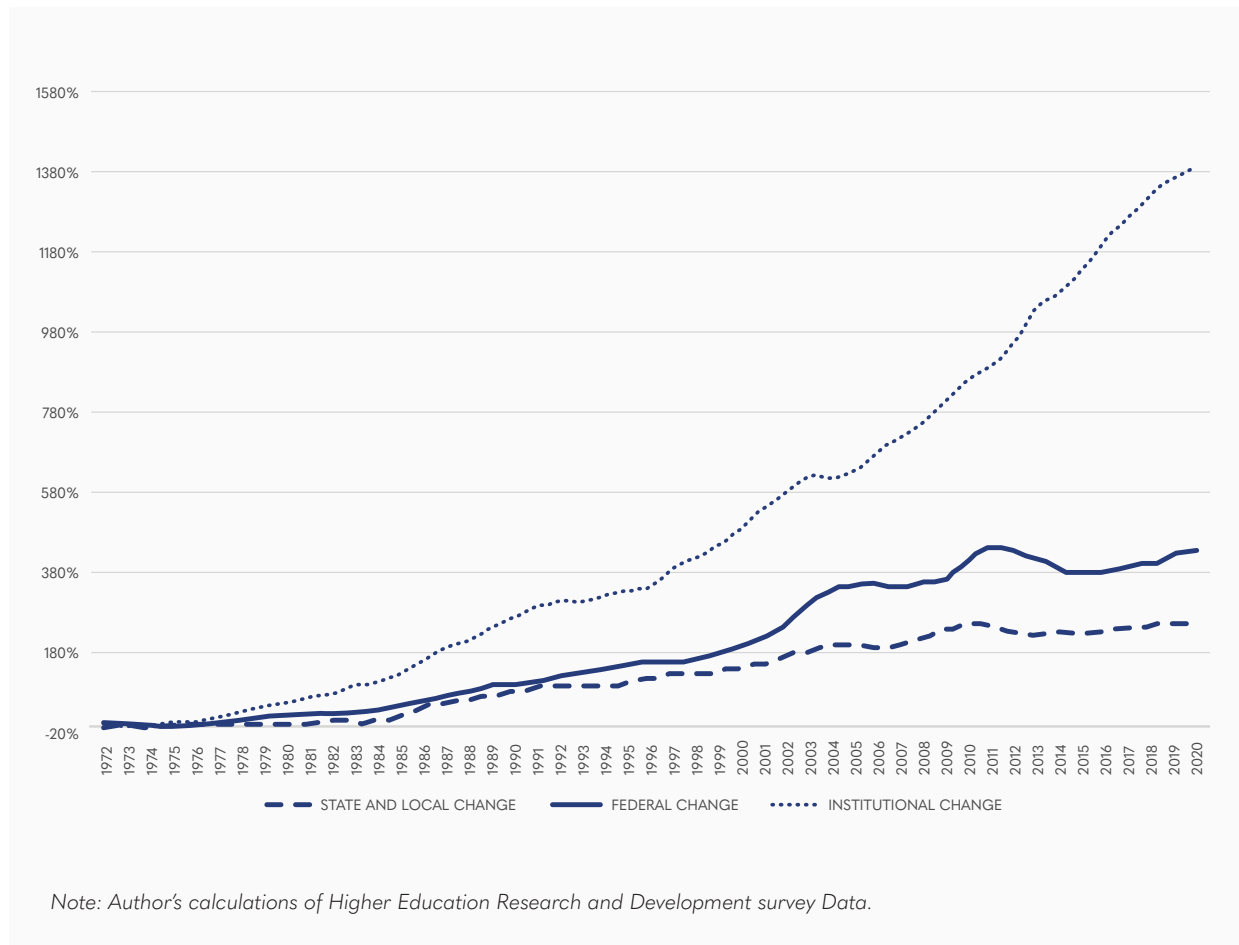
Since the 1970s, the research mission has grown in intensity at the most research-active universities and a wider swath of institutions have adopted a research mission. The increased scope and intensity of scientific research, along with the expanded set of institutions that have adopted a research mission, mean that research costs grow every year. In recent years, growth in research spending by colleges has been primarily financed by institutions using their own resources to keep pace with rising

**FIGURE 1:**  
**Total Academic R&D Expenditures from HERD Survey, 1972–2020**



<sup>3</sup> All institutional research and development expenditures search and development expenditure data from the National Science Foundation's (NSF) Higher Education Research and Development (HERD) survey. Data available from: <https://www.nsf.gov/statistics/srvyherd/#tabs-2>.

**FIGURE 2:**  
**Percent Change in E&D Expenditures from the HERD Survey, 1972–2020**



outlays. Institutional expenditures cover indirect costs not recovered through sponsored research, fund faculty and laboratory start-up costs, as well as seed and bridging funding that is intended to develop external funding (Stephan, 2012). A growing portion of research costs are passed on to students in the form of higher tuition fees and higher student to faculty ratios (Ehrenberg, Rizzo, & Jakubson, 2005). While universities do use endowment and gift funds to support research, state appropriations and student tuition fees are used to support research and graduate education at public universities (Leslie et al., 2012; Taylor & Cantwell, 2015).

Research spending accelerated starting in the mid-1990s. As Figure 1 indicates, federal funding followed an upward trend rising from approximately \$7 billion to over \$40 billion in constant dollars between 1972 and 2020, but federal spending became more volatile

starting in the mid-2000s. State and local funding grew slowly over the period to less than \$5 billion annually by 2020. Institutional funding rose steadily, reaching nearly half of the federal total by 2020. Figure 2 shows cumulative year-over-year percentage change in expenditures by the three major sources. Institutional funding grew at a much faster rate than any other source did. The sharp increase in institutional funding (measured in year-over-year change in constant dollar aggregated expenditures) is indicative of the growing number of institutions that spend on research and increased per-institutional expenditures. While the rate of increased research spending from federal and state sources leveled after 2010, the rate of growth from institutional sources shows no sign of abating. The increased cost of academic research is increasingly borne by institutions that pass a portion of that cost on to students.

## WHY ARE INSTITUTIONS SPENDING SO MUCH MORE MONEY ON RESEARCH TODAY THAN IN THE PAST?

In 2020, institutional expenditures accounted for 26.7% or greater at half of all research active public universities, and the average public university derived 28.5% of its research expenditures from institutional sources (see Table 2). Institutional funds were the second largest source of research expenditures. Although federal research funds typically exceed institutional funds, that is not always the case. HERD data show that dozens of public research universities spent more institutional than federal money on research in 2020. Many of those institutions are “new universities” (Hamilton & Neilson, 2021), or more recently established research universities, and it is notable that they serve a larger share of lower-income and BIPOC students than their more established flagship-type peers do. Beyond the “cost disease” problem (Archibald & Fledman, 2011; Baumol & Bowen, 1966) when labor and capital costs outpace productivity and efficiency gains, at least three forces – policy pressure, direct competition,

and prestige seeking – push universities to do more research and, consequently, spend more of their own money on it.

Since the Second World War, federal policy has generally encouraged further development of the research mission in higher education. During the Cold War, basic university research was enlisted by the federal government to help secure Western technological and economic advantage (Teitelbaum, 2014), from the 1980s through the 2000s, university research was seen by policymakers and business leaders as a key ingredient to national innovation and competitiveness in an open global economy (Slaughter, 1990; Slaughter & Rhoades, 2004), and more recently higher education has been enlisted by the federal government to support the U.S. in its competition with China for global influence and power (Lee, 2021).

Unlike the situation in many countries where universities get direct or performance-based funding for research, U.S. universities generally do not receive direct research funding. Instead, research

**TABLE 2:**  
**Share of Public University Research Expenditures by Source**

SOURCE	MEDIAN	MEAN	S.D.
Federal	48.6%	50.7%	20.1%
State and Local	5.4%	10.2%	12.6%
Institutional	26.7%	28.5%	17.8%
Nonprofit	3.1%	4.7%	5.4%
Industry	2.3%	4.1%	6.4%
Other	0.5%	1.9%	3.2%

Note: Author’s calculations of Higher Education Research and Development Data, 2022; n = 345

is primarily funded through competitively awarded grants. Market-like competition among researchers and universities may be a mechanism that drives American research eminence (Urquiola, 2020), but it is unlikely that competition controls costs. The NIH budget was doubled over a period of a few years between the Bill Clinton and George W. Bush administrations. The infusion of funds available to win through grant competition led universities to expand their research ambitions, investigators to submit more and more applications for funding, and generally lead to more direct competition between universities and investigators. At the same time, with flagging state appropriations, universities were widely encouraged to diversify their sources of funding, and research was often identified as a potential source of new revenue (Zemsky, et al., 2005).

Between 1999 and 2006, NIH grant success rates declined from around 55% to around 20% even as the total amount of money available was much greater (Zerhuni, 2006). Universities, primed to grow the research mission, face a more crowded field and more intense competition for research grants. As Figure 2 shows, institutional expenses grew faster than federal spending before and after the NIH doubling. Inequality between top-performing research universities and lower-status research performers is widening over time (Taylor, 2016). The difference between university research output is attributable to university capacity to support large numbers of non-faculty research staff such as postdocs and research scientists (Zhang, et. al., 2022), creating further incentive to direct university resources to expense categories that have very little to do with undergraduate education.

Higher education is a fundamentally social enterprise. Universities are understood in relation to each other (Marginson, 2006). The phenomenon of striving, or institutions that seek to attain a higher status, is well documented in higher education (O’Meara, 2007). Institutional prestige depends in part on which side of

a status boundary an organization sits. For example, institutions understood to be research universities may be viewed as more prestigious than institutions that focus exclusively on education. Therefore, we see universities celebrate when they move “up” the in the Carnegie classification. Competition to be included in more prestigious categories leads the highest-status universities to enforce boundary divisions by setting the brass ring higher and higher (Brankovic, 2018). This cycle of striving for ever harder-to-reach markers of status – for example, the trend to set a goal of reaching \$1 billion in research spending<sup>4</sup> – keeps the pressure on and further encourages the practice of devoting institutional resources to the research enterprise.

## **EXCLUSION AS A SOCIAL COST OF THE RESEARCH MISSION.**

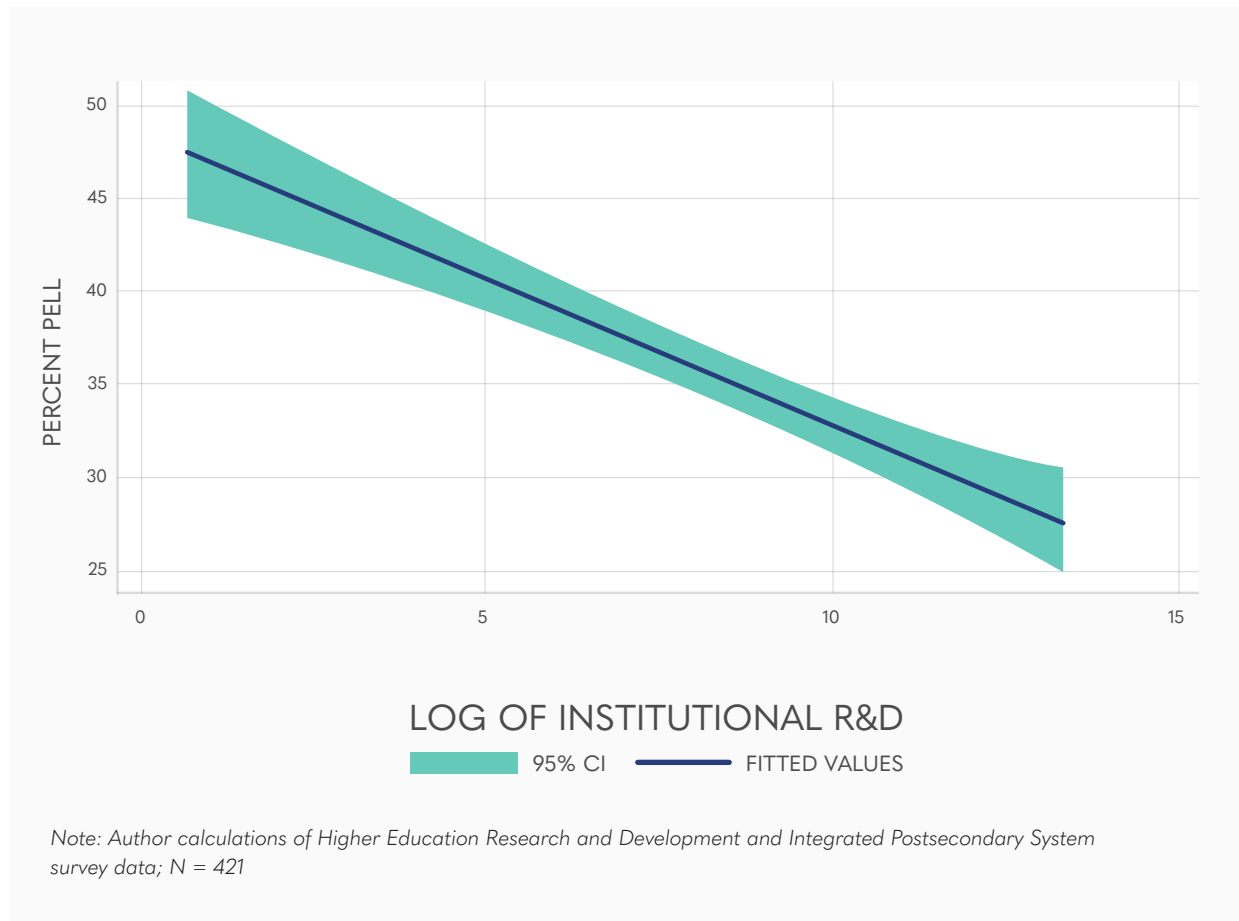
Research universities are too exclusionary. On average, research universities are more selective than other institutional types, but most public research universities, even most of those seen as flagships, are not especially selective (Cantwell & Byrd, 2021). Rather than being selective, public research universities tend to be exclusionary. Research universities do systematically underrepresent students from low-income backgrounds and students who hold marginalized racial identities (Jaquette, 2017). For years, advocacy organizations and researchers have observed this pattern and have called on public research universities to be more inclusive and representative of the populations they proposedly serve (e.g., Haycock & Gerald, 2006). Research universities cost more to run than other institutional types, and they often charge higher tuition to students. As public research universities need more unrestricted revenue for their research operations, it is plausible that they are more likely to seek and enroll students that are most able to pay at or near the published tuition price. Indeed, higher education researchers have found evidence that public universities do seek students with the greatest capacity to pay at the expense of providing inclusive access to lower-income students (Salazar, et. al., 2021).

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<sup>4</sup> Several public universities have set a goal of reaching \$1 billion in research expenditures. Examples include The University of Arizona ([https://tucson.com/news/local/university-of-arizona-sets-1-billion-research-expenditure-goal/article\\_c89e853a-4893-11ec-8e52-63ba36e0bae5.html](https://tucson.com/news/local/university-of-arizona-sets-1-billion-research-expenditure-goal/article_c89e853a-4893-11ec-8e52-63ba36e0bae5.html)) and the University of Utah (<https://research.utah.edu/researchers-corner/posts/2022/September/research-funding-ty22-sept-13-2022.php>) among others.



**FIGURE 3:**  
**Relationship between Institutional Research Expenditures and the Share of Students Who Received a Pell Grant**



Despite persistent calls for greater inclusion, a negative relationship between the share of students who received a Pell Grant and research expenditures persists. Analyzing the relationship between research expenditures and the share of undergraduate students who received a Pell Grant in a sample of 421 public research universities in 2020, and using data from IPEDS and HERD, I find a moderate negative correlation coefficient ( $-0.303$ ) for logged institutionally sourced research expenditures and the percent of undergraduates who received a Pell Grant. In other words, an increase in institutional research spending was associated with a decrease in the share of undergraduates who received a Pell Grant. The negative relationship holds in a simple linear regression model that estimates the relationship

between the share of Pell Grant recipient students and logged total and institutionally derived research expenditures when controlling for total enrollment, meaning that the relationship was not simply explained by institutional size. A 1 percent increase in institutionally derived research expenditure was associated with a 1.35% decrease in the share of undergraduate Pell Grant recipients. This relationship was significant at the 95% confidence interval. Figure 3 shows the fitted linear relationship between the percent of students who received a Pell Grant and logged institutional expenditures. The downward slope illustrates the negative association between how much public research universities spend on research from their own coffers and the share of undergraduate Pell Grant recipients.



## POLICY CONSIDERATIONS

Discussions about how to reform higher education policy should consider ways to account for the research mission. In this section, I sketch three initial ideas to get the conversation going. The ideas I present become increasingly more ambitious.

### **Idea 1: Better Data Reporting:**

Policymakers would benefit from better comparable data on institutional expenditures. The IPEDS finance surveys collect information on research expenditures and requires institutions to report on research grants and total research expenditures<sup>5</sup> but does not require clear reconciliation to show how non-sponsored research is financed. The HERD survey also asks about research revenue and expenditure and asks more detailed questions about how topline figures are constructed, but again does not allow for a clear way to understand how institutional expenditures are financed.<sup>6</sup> More clearly defining expense categories and plain accounting about how institutional research expenses are financed would improve utility of these data for policymakers. Improving available data could

allow policymakers to monitor what activities are, and are not, included in research expenditures and to understand how institutionally derived expenditures are financed. Having this information would make transparent the financial exposure tuition payers and states have to the research mission. This information could be used to engage in a productive conversation about setting standards or in a more formal accountability mechanism.

### **Idea 2: Provide Direct Support for Research through Title III of the HEA:**

Title III of the Higher Education Act (HEA) provides direct federal support for higher education institutions and is used to support a variety of programs, including funding targeted to Minority-Serving Institutions (MSIs). Congress could amend Title III to directly support the research mission for MSIs and institutions that enroll a large proportion of students who receive the Pell Grant. The aim of this grant funding would be to support the research mission at eligible institutions and relieve their need to use tuition and fee revenue, state appropriations or other general operating funds

<sup>5</sup>IPEDS finance survey: <https://surveys.nces.ed.gov/ipeds/public/survey-materials/instructions?instructionid=30067>. See parts E and D.

<sup>6</sup>HERD survey: <https://www.nsf.gov/statistics/srvyherd/surveys/srvyherd-2022.pdf>

for supporting research activity. Because institutions do not always seek and use Title III grants in ways that are consistent with program intent (Aguilar-Smith, 2021), a new program designed to support the research mission should include guardrails to ensure that funds are used as intended.

**Idea 3: A Federal–State Partnership to Control Research Expenditures & Protect Instructional Funds:**

A more ambitious policy option would be to develop a program that directly funds research and contains commitments to limit the use of tuition fees and general appropriations for research to address the issue of institutional cross-subsidies for research. This option is most likely to be appropriate when included as part of a broader federal-state partnership to reform how higher education is financed specifically to improve college access and affordability. As a basic concept, such a program could work in the following way: the federal government and states would provide direct research funding to institutions with the condition that they limit or eliminate existing general fund research spending. Additional accountability measures could include a requirement to redirect replaced research funds to instruction or student supports, requirements to maintain or expand enrollment of lower-income and BIPOC identified students, and/or requirements to reduce tuition prices, or limit increases, in recognition of additional direct funding for research.

The details of such a plan would matter a great deal. Federal-state cooperation would likely include a state opt-in provision and maintenance of effort requirements. Determining the relative contribution of the states versus the federal government will require careful consideration, especially given variation in state funding. Encouraging states to enter such a partnership will likely require the federal government providing net additional funding to the states but should also hold states accountable for reinvestment in higher education. Improved data collection is likely a pre-requisite to design and implement a federal–state research cost-sharing policy.

## CONCLUSION

The research mission is a vital component to U.S. higher education. While selective private universities and flagship-type public institutions are major research performers, many MSI and broad-access institutions are also research universities. Their research activities make valuable contributions to the regional and national economies and provide important opportunities for students. Flat federal and state research funding coupled with intensifying competition for available funds leads institutions to supplement sponsored research funds with university dollars. This growing appetite for research funding may lead universities to seek out students who are able to pay higher tuition prices. Ongoing policy conversations about how higher education is financed should incorporate the research mission. Simply curtailing the research mission would be counterproductive because the benefits accrued from research are substantial. Policies seeking to contain students’ financial exposure to the cost of research are worth considering. Better data that provide a clearer picture about how universities finance research is a first step to the nuanced policy conversations that are necessary to both reflect where research spending is now, and drive improvements in the future.

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# Author Biographies



## **Dr. Brendan Cantwell**

Dr. Brendan Cantwell is an associate professor and coordinator of the Higher, Adult, and Lifelong Education (HALE) program at Michigan State University. He is also joint editor-in-chief of the international peer-reviewed journal *Higher Education*. Brendan's research interest is in the political economy of higher education, and he addresses topics including organization and governance, policy, and academic labor. Much of his work takes an international and comparative perspective. He is co-author of *Unequal Higher Education* (Rutgers University Press) and co-editor of *Assessing the Contributions of Higher Education* (Edward Elgar) and *High Participation Systems of Higher Education* (Oxford University Press).



## **Dr. Jennifer A. Delaney**

Dr. Jennifer A. Delaney is an associate professor and director of the Higher Education Program in the Department of Education Policy, Organization, and Leadership at the University of Illinois at Urbana-Champaign. She is also the director of the Forum on the Future of Public Education at the University of Illinois. In addition, Dr. Delaney is a member of the Illinois Board of Higher Education. Her scholarly research focuses on higher education policy, with an emphasis on finance. She has published extensively in the areas of student financial aid, state budgeting for higher education, and on related topics of higher education policy. Delaney earned a PhD in higher education administration from Stanford University, an EdM in higher education from Harvard University, and a BA in English from the University of Michigan.



## **Dr. William R. Doyle**

Dr. William R. Doyle is a professor of higher education in the Department of Leadership, Policy, and Organizations at Peabody College of Vanderbilt University. Doyle serves as editor-in-chief of research in higher education. His research includes evaluating the impact of higher education policy, the antecedents and outcomes of higher education policy at the state level, and the study of political behavior as it affects higher education. Prior to joining the faculty at Vanderbilt, he was senior policy analyst at the National Center for Public Policy and Higher Education. Doyle received a master's degree in political science and a PhD in higher education from Stanford University in 2004. Doyle's recent work has explored the link between geographic opportunity for higher education and its impact on both earnings and civic outcomes. His recent policy-related work has examined the status of college affordability in every sector of higher education in all 50 states.



## **Dr. Kelly Rosinger**

Dr. Kelly Rosinger is an associate professor of education and public policy at Penn State. Her research examines the barriers students face going to and through college and how postsecondary policies can be designed to promote racial and economic equity. Kelly Rosinger has published research in *Educational Researcher*, *Educational Evaluation and Policy Analysis*, *AERA Open*, *Education Finance and Policy*, *Journal of Policy Analysis and Management*, *Review of Higher Education*, *The Journal of Higher Education*, and *Research in Higher Education*, among others. Her work has been highlighted by The New York Times, Washington Post, NPR, Chronicle of Higher Education, Inside Higher Ed, and *Diverse: Issues in Higher Education*, among others. She earned a PhD in higher education and a master's degree in public administration, both from the University of Georgia, and a bachelor's degree in public relations from the University of North Carolina at Chapel Hill. She previously worked as an assistant director of undergraduate admissions at the University of Georgia.



### **Dr. Vanessa A. Sansone**

Dr. Vanessa A. Sansone is an assistant professor of higher education in the Department of Educational Leadership and Policy Studies at The University of Texas at San Antonio (UTSA). Her areas of research interest focus on the influence of college affordability, Hispanic-Serving Institutions, and power structures and governance on the trajectories, experiences, and opportunities of historically underrepresented students. She holds a doctorate in educational leadership with an emphasis in higher education from UTSA, a master of education degree in higher education and administration from UTSA, and a bachelor of arts degree in sociology from St. Mary's University, San Antonio.



### **Dr. David R. Troutman**

Dr. David R. Troutman is the deputy commissioner for Academic Affairs at the Texas Higher Education Coordinating Board. He plays a critical role in advancing the goals of Building a Talent Strong Texas and the Governor's Tri-Agency Workforce Initiative. Troutman has extensive experience in Texas higher education, having most recently served as the chief data officer and associate vice chancellor for Institutional Research and Analysis at The University of Texas System. In this role, he led a team of research and policy analysts to transform data into timely and meaningful information in support of UT system initiatives and policy decisions across its 13 institutions. He collaborates with federal and state agencies such as the U.S. Census Bureau, Texas Workforce Commission, and nonprofit foundations such as the Bill and Melinda Gates Foundation, Lumina Foundation, and Strada Education Network. Troutman holds a PhD and master's degree in human development and family studies from the University of North Carolina at Greensboro and a bachelor's degree in psychology from Oklahoma State University.



### **Dr. Di Xu**

Dr. Di Xu is an associate professor of education policy at the University of California, Irvine, where she serves as the faculty director of the campus-wide Postsecondary Education Research and Implementation Institute and the co-director of the school-based Online Learning Research Center. Her research examines the impacts of educational programs and institutional policies on college students' academic and labor market outcomes, with a particular focus on community colleges and on students from low-income and historically underrepresented groups. Her recent projects focus on designing and implementing interventions to test strategies that are promising to improve student engagement and performance both overall and in online courses. More specifically, she's exploring how instructors hired through different employment contracts are associated with student outcomes; and investigating the enrollment, completion, and subsequent educational and labor market outcomes among students enrolled in non-credit workforce training programs, as well as malleable factors within the control of programs or institutions that may influence these outcomes. Xu earned a PhD in economics and education from Teachers College, Columbia University.

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