DESIGNING FINANCIAL AID FOR CALIFORNIA'S FUTURE

EDITED BY

the institute for college access & success

November 2018

The Institute for College Access & Success (TICAS) is an independent, nonprofit, nonpartisan organization working to make higher education more available and affordable for people of all backgrounds. To learn more about TICAS, see ticas.org and follow us on Twitter at @TICAS_org.

We are grateful to our foundation partners and individual donors whose support makes TICAS' work possible. The views expressed in this paper are solely those of TICAS and do not necessarily reflect the views of our funders.

TABLE OF CONTENTS

DESIGNING FINANCIAL AID FOR CALIFORNIA'S FUTURE

Background

California has long thought more boldly and expansively than other states about college affordability. The state's community colleges charged no tuition until 1984-85, and even after instituting a $5-per-credit enrollment fee, the state created a financial aid program to eliminate tuition for community college students who could not afford to pay (California Community Colleges Chancellor's Office, n.d.). That program, now called the California College Promise Grant, is the oldest, largest, and most progressive free community college tuition program in the nation. Additionally, the state's Cal Grant program (first created in the late 1960s) fully covers systemwide tuition and fees for public university students who meet eligibility criteria, or provides tuition stipends for those students who attend private colleges, and it offers additional resources for lower-income students to pay for non-tuition costs of college. Recent high school graduates are guaranteed a grant if they file in time and meet eligibility requirements, including financial need.

These programs, enhanced by statewide outreach efforts to ensure students know about them, help prospective and current college students in California understand that the cost of college tuition need not be a barrier to accessing college. However, *succeeding* in college requires paying for much more than tuition. Students cannot get to campus if they cannot afford gas, pass their exams if they do not have the textbooks, or focus on their studies if they have not eaten.

California's financial aid programs provide far less support for these non-tuition costs of college, which make up the majority of expenses for students attending the state's public colleges and universities. Lower income students – those with family incomes under $52,000 for a family of four (California Student Aid Commission, 2017) – can receive a Cal Grant stipend to help students pay non-tuition costs, but the purchasing power of the award is less than one-quarter of what it used to be. Also, while the Cal Grant program is well designed to reach college-bound high school graduates, it excludes the overwhelming majority of applicants who are returning to school more than a year after high school (The Institute for College Access & Success [TICAS], 2016).

As a result, even California's students face substantial college affordability challenges that hamper their ability to get to and through college. The research shows:

- The lowest-income students in the state spend much larger shares of their family incomes paying for college than any other income group. In California, public college students from families with $30,000 or less in household income typically pay no tuition after grants and scholarships, but they still have to spend about half or more of their entire family income for other costs not covered by aid (TICAS, 2017a).
- Among low-income students in public colleges, it is those at the lowest tuition colleges – the community colleges – who face the highest costs (TICAS, 2017b). Compared to students at public universities, there is less aid available for students to cover non-tuition costs, and students at community colleges may leave available aid untapped due to misperceptions about how financial aid can be used and insufficient staffing in the financial aid offices tasked with supporting them.

- Half of college graduates in California leave school with student loan debt, and nearly $23,000 of it (TICAS, 2018a). While California stacks up favorably compared to other states on this measure, what the averages don't reveal is that the students leaving college with debt are highly concentrated in the lower income brackets. About half of University of California graduates with debt come from households with family incomes no more than $56,000 (University of California, 2018). At California State University campuses, nearly eight in ten graduates with debt are from households with family incomes no greater than $54,000 (Cal State Student Association & TICAS, 2017).

These financial challenges affect students of color most acutely, and contribute to disproportionately low completion rates and disproportionately high debt burdens for underrepresented students. More than half of black, Latino, and Native American students come from households with family incomes under $30,000 where the shares of income needed to pay for college are least tenable (TICAS, 2017a). Most of the state's black, Latino, and Native-American undergraduates attend community colleges,[1] where prior TICAS research has found completion (six-year graduation and transfer) rates for these groups to be appallingly low (30%, 32%, and 37% respectively) (Campbell, Cochrane, Love, & Brueckner, 2017). Three-quarters of black California State University graduates leave college with student loan debt to repay, compared to just under half of their white peers (Cal State Student Association & TICAS, 2017).

The Path Forward for Financial Aid

Within California, there is widespread understanding and consensus that college affordability is a challenge that needs to be addressed. In a series of interviews TICAS conducted with higher education experts across the state, experts agreed college affordability challenges have a wide range of negative implications for California students, and for low-income and underrepresented students in particular (TICAS, 2018b). Insurmountable college costs are holding students back from completing college, or completing it in a timely way; keeping students at work, rather than focusing on their studies; and contributing to burdensome levels of debt.

Along with this consensus on the nature and implications of California's college affordability problems, there is also emerging agreement about how to tackle it. In 2016, TICAS challenged policymakers to deepen investments in financial aid through a bold, new "pledge" that would "offer a clearly communicated promise to students and families that college is within reach," including non-tuition costs (Cochrane & La Rocque, 2016). In 2017, at the request of the California Legislature, the state's Legislative Analyst's Office (LAO) developed a proposal to make public colleges debt-free by fully covering any college costs that students and families cannot reasonably afford through savings and earnings (LAO, 2017). In 2018, The Century Foundation, in collaboration with the California Student Aid Commission, proposed a phased-in approach to ensuring that students' total costs of college were within reach without expecting students to work or borrow unmanageable amounts (The Century Foundation, 2018).

Despite some differences in details, these proposals all arrived at similar conclusions about key weaknesses in current state aid programs and how to address them. Existing financial aid programs do not reach enough of the students who struggle to pay for college, and the focus on tuition rather than on students' total college costs have left some low- and middle- income recipients with untenable expenses to cover through work

and debt. Addressing these drawbacks would require the state to expand access to financial aid to more students, and to assess the manageability of students' total college costs, not only their tuition charges. In brief, each of the proposals envisioned a new approach to financial aid that would take students' total college costs into account, and expect that students and families would make financial contributions that were reasonable given their own financial circumstances. Federal, college, and state grant aid would cover the rest.

While this convergence can form the backbone of a new financial aid approach for California, some key questions need further exploration to fill in specific policy priorities and details. For example, what does it mean for students' and families' contributions to be reasonable, and does the federal Expected Family Contribution (EFC) formula adequately capture a student's financial circumstances particularly in high-cost areas? How well do colleges' estimates of the costs of attendance reflect the actual needs and expenses of students? How can we make financial aid communications more accessible, understandable, and resonant for students and families? How can financial aid interactions with colleges be simplified so that they are more easily understood and navigated, and how can we ensure that financial aid offices have the resources they need to deliver aid programs as they are intended?

To explore these questions and continue advancing policy discussions about how best to reform financial aid in California, TICAS engaged higher education researchers to explore specific policy questions related to aid reform. Their working papers are published in this compendium. Our aim was not to establish a definitive way of approaching any one of the topics, but rather to support the continued evolution of the policy conversation and keep it moving towards identifying the most equitable solutions.

The first group of papers explores essential components required for the state to make a true affordability promise to all Californians and investigates what it might cost to do so.

- Robert Kelchen examines whether colleges' cost of attendance estimates and the federal government's calculation of expected family contribution (EFC) should be adjusted in some way for local or regional living costs faced by the student and/or the student's family, and proposes several potential options for state policymakers to consider.

- Charlie Eaton explores what level of student out-of-pocket costs is realistic for California's students to be able to contribute, beyond what their families can afford. He recommends that students from households making less than $112,000 in income per year in California should be expected to pay no more than $4,700 to $7,600 from their own income to help cover their total costs of attendance, and not be expected to borrow loans.

- Amy Rose examines what it might cost the state to implement a comprehensive financial aid program designed to enable all Californians to attend full time for undergraduate study at any of the state's public colleges and universities. Rose's model assumes that students can contribute about $7,000 per year from student earnings, on top of parent contributions. She estimates that the state would need to spend roughly $2.1 billion more per year to cover the unmet financial need of full-time resident undergraduates attending California's public higher education institutions.

Even the best designed, targeted and funded financial aid program will not realize its full promise to students if it is poorly understood, overly complex to navigate, and delivered by financial aid offices without enough

resources to provide the level of service today's students need to access the aid they qualify for. The second group of papers grapples with how the state can better communicate with students and families about the financial aid available to them and how to ensure that they have the support they need to navigate the process from application through disbursement to repayment.

- Su Jin Gatlin Jez draws on her own research as well as the research of others to highlight ways that improving the quality and availability of financial aid information can increase educational outcomes among traditionally underserved and underrepresented students. Jez recommends reforms that can be made quickly and easily, such as standardizing terms used in financial aid documents, as well as deeper reforms that require a deeper shift in the mindset of financial aid administrators and staff from a compliance focus to a student-centered focus.

- Elizabeth Linos, Vikash Reddy, and Jesse Rothstein report key findings from their research testing the effectiveness of financial aid notifications to eligible high school seniors. In collaboration with the California Student Aid Commission, the authors redesigned state Cal Grant notification letters to be clearer, shorter, and encourage students to think of themselves as college-bound. Students who received the redesigned letters were much more likely to take the first step toward claiming the award than a randomly selected comparison group. Linos, Reddy, and Rothstein also describe forthcoming analyses that will measure impacts on college enrollment, Cal Grant payouts, and eventual college completion.

- Nicholas Hillman highlights the importance of implementation and the role financial aid offices play in student success. He recommends a statewide capacity building fund to help create a more effective and equitable aid delivery system.

Collectively, these papers persuasively articulate three imperatives: the need to put students and families at the center of reform; to close equity gaps in access, affordability and success; and to fund student financial need at adequate and predictable levels. Recent research stresses that financial aid well targeted to the students who need it most not only decreases inequities and supports social mobility, but also pays off economically as an effective and efficient way to increase educational attainment and strengthen the workforce (Colas, M., Findeisen, S., and Sachs, D, 2018).

California's public higher education system and state financial aid investments are unrivaled. Yet thinking about college costs in traditional ways, for a traditional group of students, is not sufficient to ensure the cost of college is within reach for low- and middle-income Californians. To ensure that the California promise supports meaningful, equitable college opportunity and completion, and to allow California to foster the educated workforce its future demands, the state's financial aid policies must evolve to better reflect today's understanding of students and their needs. The state cannot afford to wait.

ENDNOTES

[1] Calculations by TICAS based on data from College InSight, available at: http://college-insight.org/

REFERENCES

California Community Colleges Chancellor's Office. (n.d.). *California community colleges key facts.* Retrieved from http://californiacommunitycolleges.cccco.edu/PolicyInAction/KeyFacts.aspx

California Student Aid Commission. (2017). *2018-19 Cal Grant program income ceilings.* Retrieved from https://www.csac.ca.gov/sites/main/files/file-attachments/2018-19_income_and_asset_ceilings_0.pdf

Cal State Student Association & The Institute for College Access & Success. (2017). *Where debt comes due at CSU: Unequal debt burdens among California State University graduates.* Retrieved from https://ticas.org/sites/default/files/pub_files/where_debt_comes_due_at_csu.pdf

Campbell, C., Cochrane, D. F., Love, I., & Brueckner, E. (2017). Aiding success: The role of federal and state financial aid in supporting California community college students. *Association of Community College Trustees & The Institute for College Access & Success.* Retrieved from: https://ticas.org/sites/default/files/pub_files/acct_ticas_cccco_aiding_students_2017.pdf

The Century Foundation. (2018). *Expanding opportunity, reducing debt: Reforming California student aid.* Retrieved from: https://tcf.org/content/report/expanding-opportunity-reducing-debt/?session=1&agreed=1

Cochrane, D.F., & La Rocque, M. (2016). California student grant aid consolidation. *The Institute for College Access & Success.* Retrieved from: https://ticas.org/sites/default/files/pub_files/2016_memo_on_ca_student_grant_aid_consolidation.pdf

Colas, M., Findeisen, S., and Sachs, D. (2018). *Optimal Need-Based Financial Aid.* (Opportunity & Inclusive Growth Institute, Federal Reserve Bank of Minneapolis Working Paper 14.) Retrieved from: https://www.minneapolisfed.org/institute/institute-working-papers/optimal-need-based-financial-aid

The Institute for College Access & Success. (2016). *How and why to improve Cal Grants: Key facts and recommendations.* Retrieved from: https://ticas.org/sites/default/files/pub_files/how_and_why_to_improve_cal_grants.pdf

The Institute for College Access & Success. (2017a). *College costs in context: A state-by-state look at college (un)affordability.* Retrieved from: https://ticas.org/sites/default/files/pub_files/college_costs_in_context.pdf

The Institute for College Access & Success. (2017b). *What college costs for low-income Californians.* Retrieved from: https://ticas.org/sites/default/files/pub_files/what_college_costs_for_low-income_californians.pdf

The Institute for College Access & Success. (2018a). *Student debt and the class of 2017.* Retrieved from: https://ticas.org/sites/default/files/pub_files/classof2017.pdf

The Institute for College Access & Success. (2018b). *Unpacking California college affordability: Experts weigh in on strengths, challenges, and implications.* Retrieved from: https://ticas.org/sites/default/files/pub_files/ticas_report_ca_affordability_final.pdf

Legislative Analyst's Office. (2017). *Creating a debt free college program.* Retrieved from: https://lao.ca.gov/reports/2017/3540/Debt-Free-College-013117.pdf

University of California. (2018). *Accountability report 2018: Indicators 2.2.2 and 2.3.3.* Retrieved from: https://accountability.universityofcalifornia.edu/2018/chapters/chapter-2.html

ADJUSTING COA AND EFC FOR LIVING COSTS

By Robert Kelchen

The price of attending college continues to rise faster than increases in both inflation and family incomes. Since the 2004-05 academic year, tuition and fees have risen 50% faster than inflation at 2-year public colleges and 58% faster than inflation at 4-year public colleges. In California, tuition and fees have risen 37% faster than inflation at 2-year public colleges and 79% faster at 4-year public colleges (Ma, Baum, Pender, & Welch, 2017). Meanwhile, median household income increased by only 4% above inflation both nationwide and in California during the same period.[1]

But tuition and fees are a small part of the money needed to attend college, particularly for the 77% of students who attend public colleges and universities nationwide and the 85% of California residents enrolled in the state's public higher education system (Ginder, Kelly-Reid, & Mann, 2018). The federal government defines the full cost of attendance (COA) as including room and board, books and supplies, and other expenses such as transportation and personal care in addition to tuition and fees; students with children can also request to have childcare expenses included in the COA.[2] Currently, tuition and fees are just 21% of the COA at public 2-year colleges and 36% at public 4-year colleges (Ginder, Kelly-Reid, & Mann, 2018).

Yet living expenses have received relatively little attention until recently, even though they are the majority of the cost of attendance for most students. Living expenses, particularly for the 85% of students who live off campus, vary considerably across the country.[3] This is particularly true in California, which has some of the most expensive housing prices and some of the largest within-state variations in America. For example, the median county-level monthly rent for a one-bedroom apartment in 2017 varied from $533 in Modoc County to $2,704 in Marin, San Francisco, and San Mateo Counties (U.S. Department of Housing and Urban Development, 2018). One study estimated that the federal poverty threshold for a family of four would be 70% higher in the Bay Area if it took local living costs into account (Curran, Wolman, Hill, & Furdell, 2016).

Federal law defines the components of COA but prohibits the U.S. Department of Education from specifying how colleges set the living allowance portions of COA. This allows for financial aid administrators to use methods such as student surveys and examining local apartment listings to determine appropriate values (Federal Student Aid, 2017a). The National Association of Student Financial Aid Administrators (NASFAA), the professional association for financial aid administrators, also provides guidance for colleges as they set these allowances with a particular focus on helping improve the quality of student surveys (National Association of Student Financial Aid Administrators, 2018). The California Student Aid Commission (CSAC) is currently working to relaunch its triannual Student Expenses and Resources Survey (SEARS), a statewide effort to collect data on living allowances that has not been conducted since the 2006-07 academic year (Gordon, 2018).

It would logically follow that colleges' reported living allowances for off-campus students would generally reflect some measure of county-level housing prices, with little variation among colleges in the same geographic area and large variations between rural and urban areas in the same state. Surprisingly, this is generally not the case. My prior research on this topic with Sara Goldrick-Rab of Temple University and Braden Hosch of Stony Brook University found large variations among colleges located just miles away from each other and that institutional characteristics and urbanicity explained a very small percentage of the variation in living allowances across colleges (Kelchen, Goldrick-Rab, & Hosch, 2017).

How living allowances across colleges are set and how well they reflect actual student expenses is important because a student's financial aid package cannot exceed the college's reported COA. Living allowances that are higher than a student needs have the effect of making the college look more expensive than it actually is, since the net price of attendance, often used as a measure of affordability, is defined as the COA less all grant aid received. This could have the effect of dissuading students from attending a particular college due to price concerns. On the other hand, living allowances that are set too low can limit students' ability to pay for their education through grants and loans, forcing students to work even more hours per week or take fewer classes in order to afford college.[4]

Both federal and state need-based financial aid awards are based on the student's expected family contribution (EFC) determined by the Free Application for Federal Student Aid (FAFSA). The gap between the EFC and a college's COA comprises the student's level of financial need if they were to attend that college. However, while colleges ostensibly take actual costs into account when estimating COA, the FAFSA does not take local or regional living costs into account in the determination of EFC, even though purchasing power varies substantially both within and across states. While this is consistent with the fixed federal poverty level (FPL), and federal means-tested benefit programs that use it to determine eligibility, there are federal programs that take regional variations in living expenses into account, particularly when it comes to housing. The Department of Defense calculates housing allowances for more than 300 different cities and counties across the country for its Basic Allowance for Housing program (Defense Management Travel Office, n.d.). The Department of Housing and Urban Development calculates county-level fair market rents to use when providing housing assistance to individuals and families (U.S. Department of Housing and Urban Development, n.d.).

In this paper, I examine whether either the COA or EFC should be adjusted for local or regional living costs faced by the student and/or the student's family, and specifically address whether states should consider adopting cost-of-living adjustments to address shortcomings of federal calculations that do not recognize geographic differences in costs. I propose several potential options for policymakers to consider, as well as the pros and cons of these options to students, colleges, and policymakers.

An Overview of COA and EFCs

The federal government defines the components that colleges must include in estimating the cost of attendance (COA) in Section 472 of the Higher Education Act (Federal Student Aid, 2017a). Colleges then can set the allowances for these components in any manner that they see fit. Two of these components, tuition/fees and books/supplies, apply to all students and are typically prorated based on attendance intensity. Other COA components vary by a student's living arrangement, with separate categories for students living on campus, dependent students living off campus with their family, and all other students living off campus.

For students living on campus, the colleges' published room and board rates are used as their allowance, while dependent students living away from home and all independent students receive an allowance determined by that college. Dependent students living at home with their families do not get a room and board allowance at all whether or not they may in reality be expected to financially contribute to their families (Goldrick-Rab, 2016). A miscellaneous expenses portion of the COA is designed to cover other routine

expenses of college students such as transportation and personal care.[5] These allowances tend to be roughly 15% to 20% higher for students living off campus than on campus, with slightly higher allowances among public 4-year college students living with their families relative to away from their families (Ginder, Kelly-Reid, & Mann, 2018). Students with special circumstances, such as dependent children, those studying abroad, those with disabilities, and those facing student loan fees, generally have these aspects reflected in their cost of attendance.

Figure 1 below shows the cost of attendance estimates for the 2017-18 academic year for three institutions located in Alameda County, California: College of Alameda, California State University - East Bay, and University of California - Berkeley. The off-campus room and board estimates for these three institutions are within $700 of each other, but there is more variation in books and supplies and other expenses. Notably, the College of Alameda has the highest allowance for books and supplies (which is more than tuition and fee prices) and East Bay has the lowest miscellaneous expense allowance among the three institutions. Berkeley's miscellaneous expense allowances for students living off campus with their families is more than $7,000 higher than the other two colleges. This may be an effort to compensate for students living at home receiving no allowance for room and board.

Figure 1: Cost of Attendance Components for Alameda County Institutions, 2017-18.

Component ($)	College of Alameda	Cal State-East Bay	UC-Berkeley
Tuition and fees	$1,230	$6,834	$14,170
Books and supplies	$1,854	$1,500	$891
Room/board (on campus)	N/A	$14,184	$17,549
Room/board (off campus, no family)	$13,293	$13,923	$13,605
Other expenses (on campus)	N/A	$2,592	$4,379
Other expenses (off campus, no family)	$4,509	$2,742	$4,581
Other expenses (off campus, with family)	$4,509	$2,742	$11,738

Source: Integrated Postsecondary Education Data System (IPEDS).
Note: The College of Alameda does not have any students who live on campus.

In order to calculate an EFC that is used to determine eligibility for most types of federal financial aid (excluding unsubsidized loans) and need-based state financial aid programs, students must fill out the Free Application for Federal Student Aid (FAFSA). The full version of the FAFSA contains 108 questions to gather information on a student's and his or her parent(s)' (if dependent) income and assets from two years prior.[6] A simplified FAFSA that does not include any asset related questions is available for students with family incomes below $50,000 per year and who receive a federal means-tested benefit (such as food stamps or free/reduced price lunch). Dependent students and independent students with children who have incomes

below $25,000 and qualify for means-tested benefits automatically receive a zero EFC and do not have to answer further questions. In the 2016-17 academic year, 33% of dependent students, 82% of independent students without dependents and 69% of independent students with dependents filed a simplified version of the FAFSA or received an automatic zero EFC.[7]

For all students who do not qualify for the automatic zero EFC, an EFC is calculated using a complex formula that adjusts for state of residency, living arrangement and employment status, and age of the parent or student (Federal Student Aid, 2017b). The state of residency adjustment, the only portion of the FAFSA that varies by geographic location, occurs through an allowance for estimated state and local taxes paid that varies from 1% for states without income taxes to 8% in high-tax New Jersey and New York. No other adjustments are made for state or local-level living costs, although it is worth noting that the value of the student's (or the parent(s)') residence is not counted as an asset on the FAFSA. This could result in homeowners in high-cost areas (where housing prices tend to be higher) having lower expected family contributions and thus larger financial aid awards.

It is important to note that there is a process for adjusting both the COA and/or the EFC for students who have exceptional personal or family financial circumstances. Called a Professional Judgement (or PJ), a financial aid officer, at the request of the student and with appropriate documentation and evidence, can adjust the student's COA if the student has unusual circumstances, such as needing additional funds to support transportation or reducing the transportation allowance for students who are enrolled in online programs. A PJ is typically used to adjust a student's EFC in the case of changes in family income or family size since the end of the tax year from the FAFSA; for example, if a parent lost her job, the financial aid office could substitute current income for what was on the FAFSA.

PJs have traditionally been rare; in the 2016-17 academic year (the last year before switching from using one-year-old financial data to two-year-old data on the FAFSA), only 0.75% of undergraduate students filing the FAFSA received a professional judgment.[8] My prior research suggests that between 7% and 15% of students would see a Pell award of at least $1,000 smaller using older financial data, with a similar percentage seeing their Pell award increase by at least $1,000 (Kelchen & Jones, 2015). But since many students do not know that they can appeal their income and colleges are hesitant to grant too many PJs and risk an intense federal audit, changes to a student's COA or EFC are likely to remain rare.

Living Allowances in California

While most colleges across the country have autonomy in determining living allowances for their students, California has taken a different approach by partially centralizing how living allowances are set. The California Student Aid Commission's (CSAC) SEARS survey collected data from students from each sector in higher education on the expenses they incurred while they were enrolled in college. Although the SEARS survey has not been conducted since the 2006-07 academic year, the allowances for each COA component are adjusted for inflation each year to build an annual budget that CSAC provides to help colleges determine student expenses (California Student Aid Commission [CSAC], 2017).

Many colleges across all three sectors of public higher education in California use the SEARS survey to help shape their estimated COA; for example, the California State University system notes that statewide survey

data are used alongside information on local living costs (California State University, n.d.). A new version of the SEARS survey was piloted in spring 2018 and a full survey will be conducted in fall 2018 to develop new living allowance estimates for the 2019-20 academic year (CSAC, 2018). The University of California system also conducts a cost of attendance survey every three or four years, with the most recent survey being conducted in the 2015-16 academic year (University of California, 2017).

Because of the relatively centralized nature of how living allowances are estimated for students in California, the differences in estimates for costs of living across the state's public colleges are smaller than in most states. Room/board and miscellaneous expense allowances for off-campus students tend to differ relatively little across California colleges in the same county. In sprawling Los Angeles County, for example, off-campus room and board allowances in the 2017-18 academic year varied from $10,000 at Antelope Valley College to $14,502 at Cal State-Los Angeles and Cal State-Northridge. This is a smaller range than what is seen in other large urban counties such as in Philadelphia and Chicago. Miscellaneous expense allowances for off-campus students living away from their families ranged from $2,750 at Cal Poly-Pomona to $4,509 at Long Beach City College.[9] But there were a few examples of colleges in close proximity with vastly different living allowances. In San Bernardino County, Valley College had an off-campus room and board allowance of $7,350, while nearby Crafton Hills College (located just 15 miles away) had an allowance of $17,724.

While most colleges have adjusted off-campus living allowances based on 12 years of inflation since the last SEARS survey was conducted, actual housing prices in most California counties have increased at a much faster rate than general inflation. Between 2006 and 2018, the Consumer Price Index increased by 25.1% nationwide. Yet the median county-level rent for a one-bedroom apartment increased at a faster rate in all but Modoc County (22.8%). The other 57 counties saw a median increase of 61.8%, with three Bay Area counties (Marin, San Francisco, and San Mateo) seeing increases of 170.9%.[10] This growing gap suggests that SEARS-based estimates may be understating the gap in living allowances across counties that has been growing over time. Additionally, the growing share of household incomes being devoted to housing has likely contributed to about 40% of California four-year college students exhibiting at least some level of food insecurity (Crutchfield & Maguire, 2018; Martinez, Maynard, & Ritchie, 2016).

Recognizing that the costs of housing assumed in colleges' estimates of COA are out of date and likely to be lower than actual costs for many students, California legislators have made multiple efforts in recent years to improve COA estimates, although not all have become law. One effort, introduced in 2017 (AB-1064), would have required the California State University system to conduct a survey every three years of student expenses, essentially mandating that the SEARS survey be conducted regularly (A.B. 1064, 2017). This survey would have included the standard COA attendance components described earlier (room/board, books/supplies, and transportation), as well as building in expenses for technology, health care, child care, and recreation. It also would have required that the COA be adjusted upward to account for necessary purchases not made by students who are food or housing insecure. Governor Brown vetoed the bill after it passed the Assembly and Senate on the grounds that it required colleges to collect too many data elements at a substantial expense (Brown, 2017).

Another bill, which was introduced in 2018 (AB-3213), would have required colleges in the California State University and University of California systems, as well as California's private colleges, to include certain

components in the cost of attendance and disclose how the COA was developed. Notably, the bill would have required that room and board allowances be based on average housing costs in the immediate area, transportation allowances would have to include two trips home for students, and that the COA include allowances for a laptop computer and participating in extracurricular activities. The bill passed the Assembly's higher education committee in April 2018, but failed to gain full passage.

Options for Policymakers to Consider to Address Variation in Living Expenses for College Students by Location

In this section, I present three potential options for policymakers to consider when addressing the issue of living allowances for college students. I discuss the pros and cons of each approach to students, colleges, policymakers, and taxpayers, while also noting that policymakers can potentially adopt pieces of each of these proposals.

Option 1:

Continue conducting campus living expense surveys, with a focus on gathering updated, quality data.

The SEARS survey is a rare statewide effort to collect living expense data across multiple colleges. However, this is a relatively expensive undertaking (the 2000-01 survey cost approximately $281,000 to conduct), which is a contributing factor behind why the survey was not conducted between 2006-07 and 2018-19 (CSAC, 2001). Moving surveys online has the potential to reduce the price tag of the survey by reducing printing costs, but this comes with a trade-off of reduced response rates. The 2006-07 SEARS survey, which was administered in a combination of Web and paper surveys, saw response rates of between 29% and 54% for public colleges. Response rates for the paper SEARS surveys were also declining during the 2000s, and there were complaints among faculty that too much course time was used to fill out the surveys (CSAC, 2007). The spring 2018 pilot survey, which was conducted online, obtained a 5.4% response rate (CSAC, 2018).

Regardless of whether future campus living expense surveys are conducted via paper or online, there are concerns about whether the responses received are both from a representative portion of the student body and accurately reflect necessary expenses. College students responding to surveys disproportionately tend to be female, white, higher-income, and have higher standardized test scores (Laguilles, Williams, & Saunders, 2011; Porter & Umbach, 2006). Although this nonrepresentative sample may not affect the validity of surveys examining certain academic items, it is far more likely to bias surveys of student finances (Fosnacht, Sarraf, Howe, & Peck, 2017). At the very least, student expenditure surveys need to include questions on student and family resources in addition to standard demographic questions in order for responses to be weighted to match the student population. A preferable solution is to target resources to provide incentives to help increase response rates for student groups with low response rates, which would increase the price tag for conducting the survey but likely lead to more accurate, representative results.

It is generally difficult to collect quality data on student expenditures using a survey due to potential concerns regarding respondents' ability to recall exact details and concerns regarding social desirability bias (feeling pressures to respond in certain ways). To help mitigate these concerns, it is important to carefully test each question with several focus groups of college students and then compare their responses to their

actual spending patterns. This could be done by providing incentives to students to take the draft survey, participate in a debriefing interview following the survey, and then examining rent, utility, and grocery bills to see if the responses match actual data.

Another drawback of using surveys is that while students may be reporting data that accurately reflects their spending habits, these amounts may not reflect meeting basic needs. For example, a student who eats ramen noodles once a day and lives in an apartment that should be condemned for safety issues would likely report extremely low values for food and housing expenses. To help guard against food and housing-insecure students driving down living allowances, surveys should also include questions about whether students are able to meet their basic needs.

If the above issues are addressed, it is possible to develop a survey that provides estimates at the city level instead of at the county level. This could result in estimates that better reflect the broad range in living costs across local communities, but it is also expensive to conduct a nuanced, well-designed survey on a representative sample of students.

Option 2:

Use external (county-level or state-level) data to develop standardized measures of living expenses for estimating cost of attendance.

As mentioned earlier in this paper, the federal government has already created standardized living cost estimates for military personnel and lower-income families receiving federal housing assistance. The federal government is currently prohibited by law from requiring colleges to follow any particular guidelines or methods in calculating living allowances, but there is nothing prohibiting state governments from requiring publicly-supported colleges to estimate costs of attendance using methods other than a student survey (Kelchen, Goldrick-Rab, & Hosch, 2017).

There are existing external data sources that could be used to provide estimates of most of the non-tuition portions of the cost of attendance. The Department of Housing and Urban Development publishes annual county-level estimates of median fair market rents for dwellings ranging from zero bedrooms (studio) to four bedrooms, which provides a clear set of housing price estimates for students with a range of family situations. For students without families, assuming either a studio apartment or sharing a two-bedroom apartment is a reasonable estimate of costs—with housing allowances typically being lower for the latter than the former. For students with families, the appropriate housing allowance depends on family size.

Several other components of the cost of attendance can be estimated using the methodology defined by the MIT Living Wage Calculator, which is a no-frills set of calculations of basic needs expenses (Nadeau, 2017). Food costs are estimated using the U.S. Department of Agriculture's low-cost food plan with regional adjustments, assuming that no meals are eaten outside of the home. State-level childcare cost estimates are from the National Association of Child Care Resource and Referral Agencies for the lowest-cost option, and state-level health insurance cost estimates are from the Agency for Healthcare Research and Quality. Other health-related expenses, transportation expenses, and miscellaneous expenses come from the Bureau of Labor Statistics' Consumer Expenditure Survey and are available at the regional level. Although none of these other components are available at the county level, personal service expenditures (such as childcare) could be adjusted for local wages to account for differences in likely costs.

There are two key advantages of using externally-generated data in setting college COAs. The first is that it saves colleges and state governments a considerable sum of money by not requiring additional data collection. The second is that it at least partially depoliticizes the setting of COA estimates by eliminating the need for financial aid officers and college administrators to argue about whether the allowance makes the institution look too expensive. However, there are some drawbacks to this approach. The first is that many of the smaller living expense components, such as food and childcare, are not at the county level and could vary to some extent within states, and even county-level rent data may not be appropriate for larger counties with large variations in housing costs. This could be addressed by financial aid offices using professional judgments more than they do, but that could significantly increase the workload on financial aid offices. Better county-level data would help to address these concerns, but it would likely take a federally-sponsored survey to collect enough county-level data to generate reliable estimates.

Another political issue with moving to externally-generated living allowances is that it is likely to considerably change some colleges' current COA estimates. This is unlikely to affect how much grant aid most students can receive because grants generally fall well short of covering the full COA. For example, a University of California student receiving the maximum Pell Grant and the maximum Cal Grant would get just under $19,000 in grant aid. The cost of attendance for UC students living at home with their families (the category with the lowest COA) is at least $26,000 across the system. This means that a large change in COAs would not change how much grants most students receive, even though it would change a student's listed unmet financial need.

However, it would mean that the net price to attend some colleges could spike despite no change to tuition and fees. Even though the new net price may be more accurate than what it was previously, net price is a key affordability measure and these colleges would likely raise complaints about a change in methodology and what impact it could have on their perception as well as applications and enrollment. Additionally, some colleges may raise concerns about increased living allowances facilitating so-called "overborrowing," even though grants and federal Stafford loans are still unlikely to cover the full cost of attendance at four-year colleges.

Option 3:

For determining eligibility for state and institutional need-based grants, use county-level data to adjust the federal EFC for local living expenses.

Currently, states and colleges generally rely on the federal government's FAFSA methodology to determine eligibility for need-based grant aid.[11] But states could develop a different methodology that adjusts certain elements of the FAFSA (or the resulting EFC itself) for differences in local living expenses that would affect a family's ability to afford college. For example, adjusted gross income (or the EFC) could be adjusted upward if a family lives in a less-expensive geographic area and downward if a family is in a more-expensive area. The state of Maryland uses a regional cost of living adjustment (as determined by the secretary of higher education) in its need-based aid program, and a recent Century Foundation proposal called on CSAC to create separate living allowance estimates by commuting zones (which generally include multiple counties) (Maryland Higher Education Commission, 2018; Shireman, Baum, & Mishory, 2018). Commuting zones lack some of the nuance that county-level data would provide, but this method is likely better than not adjusting for local living costs. It may be more politically feasible to implement due to using a smaller number of regions than counties.

There are two potential ways to make this adjustment using county-level data. The first is to adjust for county-level housing prices based on the share of family income going toward housing in each county, with a potential adjustment for the quality of housing stock in the area. Given that data on fair market rents and household income at the county level are both available, this is at least feasible to do; however, adjusting for housing quality may be more difficult to do. The best comprehensive county-level living cost estimates come from the Council for Community and Economic Research's Cost of Living Index, which covers a broad range of goods and services used by households (Council for Community and Economic Research, 2017). The drawback is that the index focuses on the typical expenditures for married urban professional households in the top income quintile—a group that includes the parents of many traditional-age college students but excludes a majority of today's college students. However, although the expenditure estimates from this survey are likely well above most college students and their families, the relative differences in expenditures across areas may be reasonable.

This approach has the advantage of potentially better reflecting a family's ability to pay for college without requesting far more detailed information on income and assets than is currently included on the FAFSA. But this is also a crude measure of family resources, particularly as income at any given point in time may not be an accurate reflection of a family's wealth. And since the FAFSA does not ask for the value of a family's home (the primary source of wealth for many families), even less is known about a family's ability to pay in order to help target scarce resources.

A key analytic decision that would need to be addressed in this situation is whether the EFC would be adjusted based on the student's initial residence or where they are attending college. For independent students attending community colleges or students living at home with their parents, this is not a concern as a student's place of residence likely did not change. For dependent students who attend college in a different area than their parents live, this approach becomes more complicated. A potential solution is to base the parent's portion of the EFC on their residency, while the student's portion of the EFC is based on where they attend college. Divorced parents who live in different areas also complicate this calculation, but it could be addressed by averaging the different living costs in those areas or weighting based on each parent's contribution level.

Of major consideration for policymakers is that adjusting a student's EFC for local living expenses without simultaneously increasing the pool of available grant aid would create winners and losers at the county level and at the college level. Counties and colleges in areas with high living costs (or colleges with a high percentage of students from high-cost areas) would push for larger adjustments, while counties and colleges in low-cost areas would support smaller or no adjustments to the current needs analysis formula. This is likely to result in a clear rural-urban divide in political support for the proposal based on the likelihood of gaining or losing resources, with urban areas strongly in support of this adjustment and rural areas (which tend to have lower household incomes) opposed. In a state like California with a history of divisions between rural and urban areas (such as regarding water usage), this plan may not be feasible unless all colleges and regions of the state are at least held harmless, which would require significant new investments in need-based aid. Otherwise, opposition from politicians from less-expensive areas is likely to doom this type of proposal as lower-income students from rural areas could see cuts in their available grant aid.

Another possible way to adjust EFCs to better reflect student need would be to calculate negative EFCs based on data that students and families already provide on the FAFSA. The federal government trims EFCs back to zero in terms of determining federal aid eligibility, but the nearly 40% of students who have a zero EFC are all treated as having the same financial need even though these students may have different levels of financial resources. A state could calculate and use negative EFCs in conjunction with any of the potential adjustments to EFCs or COAs noted above, or it could do so independently in an effort to better target scarce aid dollars to the neediest students (Kelchen, 2017).

Conclusion

Granting colleges autonomy in setting estimates has resulted in large variations in living allowances across colleges in the same geographic area, giving students potentially inaccurate information about college affordability. During the 12-year period in which the SEARS survey in California was not conducted, the state's colleges have used a patchwork of methods to try to set student expense budgets. Financial aid offices often do not have the staff to conduct surveys on their own, and efforts to increase living allowances often face pushback from college leaders due to the perception of unaffordability.

In this paper, I presented several potential options for policymakers to consider that would take local living costs into account in the development of either the estimated cost of attendance or the student's expected family contribution. If any of these methods are adopted, it is important to consider whether these methods will simply provide a recommended way to adjust for living costs (alongside other forms of guidance that currently exist) or if colleges will be required to use any of these methods. Colleges are likely to protest any changes that limit their autonomy, meaning that voluntary guidelines are likely easier to adopt. But for students who are trying to compare net prices and financial aid awards across multiple colleges, a consistent method across all colleges in a state becomes more important. These and other tradeoffs will have to be weighed, but given the current state of college affordability regarding non-tuition expenses, it is clear that improvements are needed in how the living allowances portion of the COA is estimated, and California is well positioned to lead the way in such improvements.

ENDNOTES

[1] Author's calculations using Census Bureau data.

[2] The full federal definition of the cost of attendance can be found at https://www.law.cornell.edu/uscode/text/20/1087ll.

[3] Author's calculations using data from the 2015-16 National Postsecondary Student Aid Study.

[4] For many students, grants and Stafford loans do not cover the full cost of attendance, requiring students to turn to PLUS and/or private loans to cover the remaining cost of attendance. And at many community colleges in California, students do not have access to federal loans because the college has opted out of the federal student loan program. For more details on the magnitude and potential concerns of this practice, see Cochrane, D., & Szabo-Kubitz, L. (2016). *States of denial: Where community college students lack access to federal student loans.* Oakland, CA: The Institute for College Access and Success.

[5] Typically, students enrolled less than half-time are not eligible to receive the miscellaneous expenses allowance.

[6] Students who use the IRS Data Retrieval Tool can import tax data to reduce the number of questions, and skip logic further reduces the number of questions for certain students.

[7] Author's calculation using data from Federal Student Aid's 2016-17 Pell end-of-year report tables.

[8] Author's calculation using data from Federal Student Aid's 2016-17 Pell end-of-year report tables.

[9] These analyses are based on data colleges reported to the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS).

[10] Author's calculations using Department of Housing and Urban Development fair market rent data.

REFERENCES

A.B. 1064. California State University: Student Discretionary Expenses Survey. Regular Session 2017-2018. (CA 2017). Retrieved from http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1064

A.B. 3213. True Cost of Attendance Act. Regular Session 2017-2018. (CA 2018). Retrieved from http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB3213

Brown, E. G. (2017, October 12). AB 1064 Veto Message. *Office of the Governor.* Retrieved from https://www.gov.ca.gov/wp-content/uploads/2017/11/AB_1064_Veto_Message_2017.pdf

California State University. (n.d.). Campus costs of attendance. Retrieved from https://www2.calstate.edu/attend/paying-for-college/pages/campus-costs-of-attendance.aspx

California Student Aid Commission. (2001). 2000-2001 data casebook (Volume 1). *SEARS Casebooks - California Student Aid Commission.* Retrieved from https://www.csac.ca.gov/sites/main/files/file-attachments/2000-01_sears_casebook_volume_i.pdf

California Student Aid Commission. (2007). 2006-2007 SEARS data casebook. *SEARS Casebooks - California Student Aid Commission.* Retrieved from https://www.csac.ca.gov/sites/main/files/file-attachments/200607searscasebookfinal.pdf

California Student Aid Commission. (2017). 2018-19 student expense budgets. *Student Expense Budget - California Student Aid Commission.* Retrieved from https://www.csac.ca.gov/sites/main/files/file-attachments/2018-19_student_expense_budget_0.pdf

California Student Aid Commission. (2018). Update on the student expenses and resources survey (SEARS). *SEARS - California Student Aid Commission.* Retrieved from http://www.csac.ca.gov/sites/main/files/file-attachments/2018091314commitem12.pdf

Cost of Attendance, 20 U.S. Code § 1087ll.

Council for Community and Economic Research. (2017). *Cost of living index manual.* Arlington, VA: Author.

Crutchfield, R., & Maguire, J. (2018). *Study of student basic needs.* Long Beach, CA: The California State University.

Curran, L. B., Wolman, H., Hill, E. W., & Furdell, K. (2016). *Poverty, programs, and prices: How adjusting for costs of living would affect federal benefits eligibility.* Washington, DC: Brookings Institution.

Defense Management Travel Office (n.d.). Basic allowance for housing (BAH). *The DOD Center for Travel Excellence.* Retrieved from https://www.defensetravel.dod.mil/site/bah.cfm

Federal Student Aid (2017a). *2017-18 Federal Student Aid handbook.* Washington, DC: U.S. Department of Education.

Federal Student Aid (2017b). *The EFC formula, 2018-19.* Washington, DC: Author.

Fosnacht, K., Sarraf, S., Howe, E., & Peck, L. K. (2017). How important are high response rates for college surveys? *The Review of Higher Education,* 40(2), 245-265.

Ginder, S. A., Kelly-Reid, J. E., & Mann, F. B. (2018). *Postsecondary institutions and cost of attendance in 2017-18; degrees and other awards conferred, 2016-17; and 12-month enrollment, 2016-17*. Washington, DC: National Center for Education Statistics Report 2018-060.

Goldrick-Rab, S. (2016). *Paying the price: College costs, financial aid, and the betrayal of the American dream*. Chicago, IL: University of Chicago Press.

Gordon, L. (2018, January 23). Bed, books, meals & cell phone: New study to tally real costs of college in California. *EdSource*. Retrieved from https://edsource.org/2018/bed-books-meals-cell-phone-new-study-to-tally-real-costs-of-college-in-california/592806

Kelchen, R. (2017). The distributional and cost implications of negative expected family contributions. *Journal of Student Financial Aid, 47*(1), 4-24.

Kelchen, R., & Jones, G. (2015). A simulation of Pell Grant awards and costs using prior-prior year financial data. *Journal of Education Finance, 40*(3), 253-272.

Kelchen, R., Goldrick-Rab, S., & Hosch, B. (2017). The costs of college attendance: Examining variation and consistency in institutional living cost allowances. *The Journal of Higher Education, 88*(6), 947-971.

Laguilles, J. S., Williams, E. A., & Saunders, D. B. (2011). Can lottery incentives boost web survey response rates? Findings from four experiments. *Research in Higher Education, 52*(5), 537-553.

Ma, J., Baum, S., Pender, M., & Welch, M. (2017). *Trends in college pricing 2017*. New York, NY: The College Board.

Martinez, S. M., Maynard, K., & Ritchie, L. D. (2016). *Student food access and security study.* Oakland, CA: University of California Global Food Initiative.

Maryland Higher Education Commission (2018, March 28). *Meeting booklet*. Retrieved from https://mhec.maryland.gov/About/SiteAssets/Lists/Meeting%20Agendas%20and%20Agenda%20Books/EditForm/CBook3-28-18.pdf

Nadeau, C. A. (2017). *Living wage calculator: User's guide/technical notes.* Cambridge, MA: Massachusetts Institute of Technology.

National Association of Student Financial Aid Administrators (2018). *Developing the cost of attendance*. Washington, DC: Author.

Office of the Vice President for Student Affairs Student Financial Support (2017). Findings from the undergraduate cost of attendance survey 2015-16. *The University of California*. Retrieved from http://regents.universityofcalifornia.edu/regmeet/mar17/a1attach.pdf

Porter, S. R., & Umbach, P. D. (2006). Student survey response rates across institutions: Why do they vary? *Research in Higher Education, 47*(2), 229-247.

Shireman, R., Baum, S., & Mishory, J. (2018). *Expanding opportunity, reducing debt: Reforming California student aid*. New York, NY: The Century Foundation.

U.S. Department of Housing and Urban Development (n.d.). Fair market rents. *Dataset*. Retrieved from https://www.huduser.gov/portal/datasets/fmr.html

U.S. Department of Housing and Urban Development. (2018). 50th Percentile Rent Estimates. *Dataset*. Retrieved from https://www.huduser.gov/portal/datasets/50per.html

DEBT FREE COLLEGE AND STUDENT OUT-OF-POCKET COSTS: THE CASE OF CALIFORNIA

By Charlie Eaton

Abstract

Proposals to make public colleges and universities debt free have gained increasing attention in California and nationally in recent years. Yet few have asked what level of student out-of-pocket costs would be required for a debt free system. This paper estimates debt free student out-of-pocket costs as how much students would pay from their own savings or income to cover a portion of their total costs of attendance, including tuition, room, board, and other expenses – including for students living at home or off campus. To make California's public higher education system debt free, I estimate that student out-of-pocket costs would need to be set at a maximum of $4,700 to $7,600 for students from households with less than $112,000 in household income. I arrive at this estimate via two methods. The first method is based on current student borrowing levels and combined student and parent out-of-pocket costs. The second method is based on after-tax earnings estimates for the optimal number of hours of paid employment for students while in college.

Introduction

State and federal lawmakers have released a variety of proposals in recent years to make public higher education debt free (Mason & Watanabe, 2017; Koseff, 2017; Leal, 2017; Chen, 2017; Alvarez, 2016). Neither policymakers nor academics, however, have paid much attention to what students' out-of-pocket costs would or should be under a debt free college system. By out-of-pocket costs, I mean how much students pay from their own savings or income to cover a portion of their total costs of attendance, including tuition, room, board, and other expenses – including for students living at home or off campus. To know what would really make college debt free, we therefore need to ask what portion of these costs students could afford without loans while still thriving in school. This paper addresses this question in the context of California's public university and community college systems.

Even within California, current out-of-pocket costs for college vary substantially by students' household income levels and between types of colleges. This variation occurs because of differences in tuition rates, availability of non-loan financial aid, and disparate household wealth in the University of California (UC), California State University (CSU), and state community college systems. We can gain insights into what students can afford by comparing how student loan borrowing varies between and within these systems in relationship to their current out-of-pocket cost levels. We can also learn about related risks of students working excessive hours in paid employment and failing to repay loans after college by observing how they vary in relationship to college costs and students' household income.

Based on such an analysis, I find that a debt-free financial aid system in California would likely require that students from households with less than approximately $112,000 in annual income pay no more than $4,700 to $7,600 in out-of-pocket costs annually. For borrowing by students themselves (not including parental

borrowing), UC and national data show that the prevalence of borrowing already drops considerably above the $112,000 income threshold.[1] At UC for example, nearly 60 percent of students with $56,000 to $112,000 in household income borrow compared to just 40 percent of students with $112,000 to $169,000 in income and just 20 percent of students from households with incomes above $169,000. For these wealthier students, public colleges and universities in California are already effectively debt free because of their parents' economic resources. To level the playing field when students leave college and enter the workforce, we therefore can concentrate debt free financial aid on students with household income below $112,000.

I use two simple methods for arriving at the $4,700 to 7,600 student out-of-pocket cost limit. First, I subtract current borrowing levels and current parental contributions to college costs from current combined student-and-parent out-of-pocket costs based on the best available data. Second, I estimate California students' after-tax income from paid employment at minimum wage working 15 hours per week, the maximum hours of paid employment that existing research suggests most students can undertake while successfully studying full time. This out-of-pocket cost maximum would be on top of parents' contributions in support of their child's college costs. For dependent students, parents' contributions could be set based on the federal Expected Family Contribution (EFC) formula or current average parental contributions by income group. Under such parental contribution levels, the $4,700 to $7,600 student out-of-pocket cost maximum would create a debt free path to a degree for all students with less than $112,000 in household income. These parental contribution levels would also be debt free for most parents with less than $48,000 in household income for whom current EFC levels are near zero. The student out-of-pocket cost maximum would not necessarily be debt free for parents of dependent students with household incomes above $48,000. Further research may be needed to assess the impacts on social and economic equity of current EFC levels and the parental borrowing they necessitate.

I present these estimates as a starting point for further analysis and discussion. There are substantial limitations to currently published data for estimating a debt-free out-of-pocket cost. For example, published data provide little detail on current levels of parental borrowing across income groups. It is also difficult to assess the share of college costs that are actually covered by parents of dependent students at present. In the coming year, the California Student Aid Commission will complete its first Student Expenses and Resources Survey (SEARS) since 2007. The SEARS survey and administrative data from California's public higher education systems could fill gaps in existing published data to help estimate more precise debt-free out-of-pocket cost maximums.

Before elaborating this paper's debt-free out-of-pocket cost estimates, I first conceptualize the idea of student out-of-pocket college costs as an alternative to the term "self-help," which is sometimes used by policy makers and financial aid administrators. Second, I review data and prior research that show most UC and CSU low- and middle- income postsecondary students are borrowing with large shares of UC, CSU, and community college borrowers struggling to repay debts after leaving school. Third, I elaborate on my first method for estimating a debt free out-of-pocket cost maximum by subtracting current borrowing levels and average parental financial support from current out-of-pocket cost levels. Fourth, I provide further explanation of my second method for calculating an out-of-pocket cost maximum based on optimal work hours. Finally, I conclude by discussing why a work hours-based debt free estimate may be preferable for equity reasons but necessitates that actual costs of attendance accurately include all living expenses when used to calculate grant aid awards. I also discuss potential unintended political consequences if cost maximums are set too high or are not extended to enough middle-income students.

1. Conceptualizing College Costs

Since the postwar GI Bill, federal and state programs have played an important role in financing U.S. higher education, especially for low- and middle- income students at public institutions (Mettlet, 2005; Mettler, 2014; Eaton, Kulkarni, Birgeneau, Brad, & Hout, 2017). Evolving out of the 1965 Higher Education Act within President Johnson's Great Society campaign, the maximum federal Pell Grant today provides up to $6,095 to help low-income students pay for college. Pell Grant aid was originally extended to middle income students in the 1970s but in the 1980s shifted to primarily benefit low-income students (Eaton, n.d.). Then, beginning in the 1970s and accelerating in the 1990s, federal student loans became the primary vehicle by which the federal government helps pay for college (Berman & Stivers, 2016; Eaton, n.d.). Since 2000, the State of California has also reduced its direct appropriations to public colleges and universities on a per-student basis (Douglas & Bleemer, 2018). Tracking national patterns (Legislative Analyst's Office, 2017), California's public postsecondary schools substantially increased tuition to offset state funding cuts (Eaton et al., 2017).

Rising tuition, cost-of-living, and other expenses raise affordability challenges for the vast majority of California college students due to family income constraints. Figure 1 shows that across all three California higher education segments, most students come from households with less than $48,000 in income annually. At community colleges, nearly 70 percent of students come from households making less than $30,000 annually. Over 95 percent of community college students have household incomes below $75,000, a level that is just over California's median income. At UC's Berkeley and LA flagships, other UCs, and CSU, nearly 40 percent of students have household incomes below $30,000. Even at UC and CSU, only 10 to 15 percent of students come from households with income over $110,000 annually, which is roughly the 70th percentile for household income in California (U.S. Census Bureau, n.d.).

In part to offset tuition hikes for California's super-majority of low-and-middle-income students, California lawmakers and college leaders have expanded grant aid programs. Since 2000, Cal Grants grew to provide over $2 billion annually in grant aid for over 350,000 low-income California students (Lapid & Douglas, 2016). The California College Promise Grant simultaneously makes college tuition free for half of the state's 2.1 million community college students (California Community Colleges Chancellor's Office, 2017). Since 2014, California's Middle Class Scholarship program has also provided additional grant aid. Finally, the UC system internally uses tuition revenue from wealthier students to provide grant aid to low- and middle- income students (Lapid & Douglas, 2016). CSU's State University Grant similarly provides financial aid to low-to-middle income students who are not eligible to receive Cal Grants (The California State University, n.d.). As a product of these financial aid programs, majorities of Californians from low- and middle- income households still pay close to zero tuition and fees. Nevertheless, these students incur substantial college costs from room, board, books, supplies, campus service fees, and other living expenses (Goldrick-Rab, 2016). At the same time, hundreds of thousands of capable low- and middle- income students are excluded from the most generous Cal Grant awards because of arcane eligibility rules intended to limit the cost of the program (Eaton et al., 2017).

Under these arrangements, current out-of-pocket costs for low- and middle- income students exceed what they and their families can afford unless they take on student debt or work more. The best available data indicate that low-income students incur out-of-pocket costs of $13,467 at community colleges, $10,811 at CSU, and $10,033 at UC, after accounting for support from Pell Grants and California's grant aid programs.[2] Out-of-pocket costs tend to be higher at CSU and particularly at community colleges because California's current

financial aid system does not adequately cover their non-tuition costs. At community colleges, for example, non-tuition expenses comprise more than 90 percent of total college costs. Students from households with less than $48,000 in income are themselves expected to cover much of these costs through paid employment, savings, or student debt. As household income increases, particularly above a rough $60,000 threshold, federal Expected Family Contribution formulas encourage parents to cover some, but not all, of these out-of-pocket costs.

Pell Grants and California's current grant aid programs make total out-of-pocket costs amounts lower for low- and middle- income students than for wealthy students, though these out-of-pocket costs still tend to be higher as a share of household income (Cochrane & Ahlman, 2017). Estimates for CSU and community colleges in Figure 2 should particularly be viewed with caution, however, because they exclude out-of-pocket living expenses for students who live at home with their parents (La Rocque, 2016). For UC, where few students live at home, we can see that out-pocket costs increase from just over $10,000 for students from households with less than $48,000 in income to just under $15,000 for students from households with $48,000 to $75,000 in income. At UC, out-of-pocket costs increase further still for students with $75,000 to $110,000 in income to just over $20,000 annually. It is worth noting, however, that out-of-pocket costs have declined for these middle-income students since 2010 as both UC and the state of California have expanded grant aid to those students.

College administrators and policymakers sometimes use the term "self-help" to refer to the portion of college costs that students themselves must shoulder using student loans, work study, financial assistance from family, or other earnings. The term is misleading because it suggests that students who study hard but lack financial resources to pay for college are unwilling or unable to "help themselves." The term may also be politically counterproductive, undermining the idea of higher education as a public good for which taxpayers should help pay. As such, I eschew the loaded term of self-help and instead refer to what students must pay as "student out-of-pocket costs," a phrase that is more neutral and intuitive.

Who Borrows in California and What Are the Consequences?

An implicit assumption of debt free college proposals is that student loans burden borrowers with financial stresses that disadvantage them relative to students who were wealthy enough to attend school without assuming any debt. It follows that debt free financial aid should particularly be directed to those students who borrow and experience financial stresses from that borrowing. To meet current out-of-pocket costs, borrowing at public institutions in California and nationally particularly occurs among students from households with less than $112,000 in income. Underrepresented racial and ethnic groups borrow more frequently as well. These groups of borrowers also show signs of financial distress at higher rates, particularly at CSU and community colleges where they make up the vast majority of students.

Students turn to debt more commonly at UC and CSU than at California's community colleges. The share of students with loans particularly increased at non-flagship UC campuses and at CSU in the aftermath of the 2008 financial crisis. Figure 3 charts the share of full-time, first-year students with student debt from 2000 to 2016. At non-flagship UCs, the share of students with debt increased from 40 percent to over 50 percent. At CSUs, the share of students borrowing in their first year increased from under 30 percent to over 40 percent.

The borrowing rate among community college students has consistently remained around 5 percent, in part because over 10 percent of California community college students attend schools that do not participate in federal student loan programs (Cochrane & Szabo-Kubitz, 2016b). We shall see in subsequent sections of the paper, however, that California's overwhelmingly low-income community college students typically work far more hours in paid employment than is beneficial for their academic success.

National studies and data published by UC show that student loan borrowing particularly occurs at 4-year public schools among students with less than $112,000 in household income (Houle, 2013). Presented in Figure 4, UC's in-state borrowing rates show that students from households with less than $56,000 in income today actually borrow less often than earlier in the 2000s, but still have the highest borrowing rate at just under 70 percent. Similarly, students with household income between $56,000 and $112,000 still borrow at a rate just under 60 percent, substantially higher than the mere 20 percent of students from the highest income households who borrow. These data indicate that debt free financial aid is needed only for households with less than $112,000 in income. Students from the vast majority of wealthier households are already able to attend college debt free.

Data from the National Postsecondary Student Aid Study (NPSAS) similarly shows that the share of in-state Pell Grant recipients who borrow at CSU is almost 10 percentage points higher than among in-state non-Pell students. This is also the case at UC, where the share of in-state Pell Grant recipients who borrow is 20 percentage points higher than among non-Pell students.[3] Unfortunately, more fine-grained data on borrowing by income has not been published by CSU. A recent report on borrowing by CSU students, however, shows that students from underrepresented racial and ethnic groups also borrow at much higher rates (California State Student Association & TICAS, 2017). The study found that 76 percent of Black or African American CSU bachelor's degree recipients had student debt, 19 percentage points higher than the 47 percent borrowing rate for White graduates. Latinos also borrowed at a higher rate of 57 percent.

Among those students who do borrow, the amount of borrowing varies little by income group within each system. Figure 5 graphs the average debt of students upon leaving school for each system and for the three income groups that are disaggregated in the College Scorecard database publication of National Student Loan Data System data. This shows that average levels of borrowing varied little between income groups from the mid-2000s onward. In the UC system, average debt upon leaving school increased from almost $13,000 to nearly $16,000 in recent years. In the CSU system, average debt increased from about $10,000 to over $12,000. Average debt for community college borrowers increased less pronouncedly to about $5,000, though it is worth remembering that only about 5 percent of community college students borrow.

It is also instructive that Figure 5 shows prior to 2002, California students with incomes below $30,000 borrowed substantially more than middle- and higher- income students. Reflecting a largescale expansion of Cal Grants in the early 2000s, however, average amounts borrowed by low-income students declined substantially and has tracked borrowing by other income groups since the 2000s. This supports the intuition that expanded grant aid can be a potent tool for reducing low-income students' exposure to debt.

Data on student loan repayment rates indicate high levels of financial distress from the observed levels of borrowing, particularly among low- and middle- income borrowers in the CSU and community college systems. Figure 6 presents student loan repayment rates for each of the California systems and for College Scorecard's three income groups for 2007 to 2013, all of the years for which data were available at the time of writing.

Repayment rates measure the share of students who have repaid at least $1 in principal on their undergraduate debt and not defaulted on their loans in the three years since they left school and entered loan repayment (students who continue in graduate school are excluded from repayment rates until they enter into repayment after educational deferments). We can see that wealthier borrowers and UC borrowers fared best. But even among wealthier UC borrowers, about 1 in 5 of those who have left school after 2010 failed to repay any of their principal within three years. Among low-income UC borrowers, the share failing to repay any principal remained just under 30 percent even for those who left school in 2013 as California's job market was recovering from the 2008 recession.

At CSU, 30 percent or more of borrowers from all income groups also failed to repay any principal within three years. More than 40 percent of low-income borrowers leaving CSU after 2010 failed to repay any principal.[4] Among low-income community college borrowers, nearly 70 percent of those who left school after 2011 failed to repay any principal. These high rates of repayment failure among low-income students are additionally alarming when we recall that nearly 70 percent of low-income students at UC and 76 percent of African American students at CSU have debt. We should also remember that just under 60 percent of UC and CSU students are from households with less than $48,000 in annual income and just under 70 percent of all community college students are from households with less than $30,000 in annual income.

Low rates of student loan repayment are underappreciated as a sign of economic stress on borrowers. Federal policy makers under the Obama administration took laudable steps to reduce economic strain on borrowers by expanding what is known as Income Driven Repayment (IDR) (Shireman, 2017). Under IDR, borrowers generally are required to pay no more on loans annually than 10 percent of their discretionary income, with discretionary income defined as the difference between a borrower's annual income and 150 percent of the poverty line for their household size (U.S. Department of Education, n.d.). If a borrower has not paid off their loan balance at this payment rate after 20 or 25 years, the remaining loan balance is forgiven. Since 2014, IDR enrollment has increased from 13 percent to 28 percent of all borrowers in repayment (College Board, n.d.).

While an important improvement, current IDR plans are not a panacea for reducing economic burdens from student debt. Student debt in general is effectively a regressive tax on the majorities of low- and middle-income public university students who borrow while their wealthier peers leave school with zero debt. IDR importantly reduces the regressive nature of student debt by reducing the loan payments for borrowers who have low and middle incomes. For individuals with incomes below 150 percent of the poverty line (in California, $18,000 for an individual and $30,000 for a parent of two), IDR reduces payments to zero. But not all borrowers are able to enroll in IDR plans. For example, students who are in default on loans are ineligible for IDR. We need more research to understand other potential obstacles to enrollment in IDR by students who would benefit.

Even for some borrowers who can enroll in IDR, required payments can still contribute to economic distress and social inequities. For example, a California borrower with $30,000 in income after college would be required to make roughly $1,200 in payments annually. For a Californian with this level of income, $1,200 in loan payments is equivalent to about a 25 percent increase in their income tax burden including state, federal, and FICA taxes. Because only 20 percent of wealthier students at UC borrow, they pay no equivalent student debt tax after college. So while IDR is much more progressive than a student debt system without it, debt free financial aid would be more progressive still.

Debt free financial aid would also protect low-income students from the negative impacts of student debt on access to affordable credit that can occur even under IDR. Constrained access to affordable credit can have long-term impacts on student borrowers' economic security (Fourcade & Healy, 2013). For example, if a borrower incurs substantial healthcare costs not covered by insurance, the availability and interest rates for debt to cover medical costs may be worse for a low-income person with substantial student debt. This likely makes even IDR borrowers more vulnerable to medical bankruptcy, the most common form of bankruptcy in America. There is also some evidence that having student debt limits borrowers' odds of buying a home (Houle & Berger, 2015).

Adjusting Out-of-Pocket Costs According to Current Borrowing Levels

One way to estimate an effective debt free out-of-pocket cost is to subtract current levels of borrowing and parental support from current out-of-pocket cost levels. With data presented in this paper, we can use this method to estimate a debt free out-of-pocket cost level with reasonable precision for UC students and for low-income CSU students. This method is not suitable for estimating appropriate out-of-pocket costs for community college students, who rely more on excessive paid employment than on student debt to cover current out-of-pocket costs (Arum & Roska, 2011).[5] Debt free out-of-pocket cost estimates for all UC income groups and for low-income CSU students are presented in Table 1.

For CSU and UC students with less than $30,000 in household income, Table 1 uses data gathered from online "Net Price Calculators" for the nine UC undergraduate campuses and for the nine CSU campuses nearest them.[6] The $10,033 estimated out-of-pocket cost for these UC students using this data is just 5 percent lower than estimates of out-of-pocket costs for the same students using IPEDS data. Given the consistency of these estimates, I use IPEDS data for current out-of-pocket costs for the higher income groups of UC students. The online net price calculator estimates for CSU costs, however, are 37 percent higher than estimates using IPEDS data. This reflects that IPEDS includes first-time, full-time students only. First-time, full-time students are both more likely to receive state Cal Grants and to live with their parents, a group for whom IPEDS cost data exclude living costs (La Rocque, 2016). Net price calculators, in contrast, enable assessments of more typical students' costs. Given this discrepancy, I do not use IPEDS data to estimate current or debt-free out-of-pocket costs for higher income CSU students.

The first row of Table 1 shows that 2017 combined student and parent out-of-pocket costs increased as families' household income increased. This reflects that parental contributions increase with household income. The second row of Table 1 subtracts average annual student borrowing levels from IPEDS. Borrowing rates are held constant for all UC income groups because neither College Scorecard nor NPSAS survey data show systematic differences in borrowing levels between income groups. Row three of Table 1 subtracts average parental financial contributions to arrive at an estimated debt free student out-of-pocket cost. Because average family contributions are zero for households with less than $30,000 in income, we can estimate in the first two columns with some confidence that a debt free student out-of-pocket cost is between $4,672 based on UC data and $5,515 based on CSU data. While parents with higher income are likely to bear higher out-of-pocket costs, we lack data to assess if students with higher incomes can themselves draw on higher wages or savings to cover greater out-of-pocket costs than the debt-free out-pocket cost level for students with less than $30,000 in household income. Table 1 therefore sets the debt-free out-of-pocket cost for all other students below

$112,000 in household income at UC at the same $4,672 level. This allows us to estimate average parental contributions for higher income groups by taking the difference between current combined student and parent out-of-pocket costs and the estimated debt free out-of-pocket cost of $4,672.

It is important to note that these out-of-pocket cost levels may make college debt free for the students themselves, but not for their parents. The estimated current parental contributions by income group closely track the federal Estimated Family Contributions (EFC) formula. It is beyond the scope of this paper to assess if current EFC levels and levels of parental financial support are appropriate. We can say, however, that parents do appear to provide EFC levels of financial support to middle income students given that borrowing is not higher among students with $48,000 to $75,000 in annual income than for students with lower household income.

Adjusting Out-of-Pocket Costs According to Optimal Paid Employment Hours

Growing evidence indicates that college costs also inflict hardship on lower-income students while in school that can adversely affect their wellbeing and odds of success (Goldrick-Rab, 2016; Armstrong & Hamilton, 2013; Hamilton, 2016). Nationally, the share of students from low-income backgrounds has increased as college costs have risen (Bound, Lovenheim, & Turner, 2009). Parallel to these two trends, students have tended to work longer hours in paid employment while also in school (Babcock & Marks, 2011). As a result, excessive working hours are thought to result in declines in learning and college completion (Arum & Roska, 2011; Ehrenberg & Sherman, 2987; Stinebrickner & College, 2014). Working more than 20 hours per week while in school has particularly been shown to negatively impact college persistence (Bozick, 2007; Ehrenberg & Sherman, 1987).

The Center for Studies in Higher Education has recently deployed an undergraduate Student Experience in the Research University (SERU) survey across the UC system that provides instructive data about potential hardships while enrolled. In an analysis of 2014 SERU data, Lapid and Douglas (2016) found substantial cause for concern about paid hours of work while in school for middle- and low- income students. Figure 7 presents boxplots from Lapid and Douglas' analysis. These show that 25 percent of students worked more than 20 hours per week in all income categories. The median hours of work per week were higher for lower-income students at 15 hours per week. Among the 8 percent of students who support themselves financially in the UC system, the median was 20 hours of paid work per week with 25 percent of those students working more than 30 hours per week.

Lapid and Douglas also find that lower income students were more likely to experience other forms of economic distress that could hinder their performance. For example, more than 33 percent of students who supported themselves financially or came from households with less than $35,000 in income reported skipping meals to make ends meet financially. Just under 30 percent of students from households with less than $80,000 in household income also reported skipping meals. Higher income students reported skipping meals at less than half the rate of low-income students, suggesting that skipping meals is not only a function of college culture or student thriftiness. Given that 73 percent of UC students come from households with income under $75,000, their high rates of skipping meals raise an important alarm bell about college costs.

Students also reported increasing anxiety about being able to afford college costs in SERU surveys between 2010 and 2014 (Lapid & Douglas, 2016). In 2014, the only year for which data is available by income category, more than 60 percent of students from households with less than $80,000 in income reported concern over accumulating educational debt. Less than half of students with $125,000 in income expressed such concerns.

Mounting anxiety about student debt raises another red flag because recent research has shown that excessive student loan debt itself can cause students to choose to drop out (Dwyer, McCloud, Hodson, 2012; Dwyer, Hodson, &McCloud, 2013). Such a choice can be counterproductive as it is a well-established fact that failing to complete a degree is likely to substantially diminish a students' future earnings (Hout, 2012).

Studies of community college students have found even deeper signs of economic distress that negatively impact student success (Cochrane & Szabo-Kubitz, 2016a). One survey found that 36 percent of community college students said they were extremely or very likely to take fewer courses because they financially had to complete more hours of paid employment. Another 43 percent of students said they were somewhat or slightly likely to take fewer course credits.

A conservative approach to assuring student success might then try to enable students from all household income levels to study with no more than 15 hours per week of paid employment. It is hard to justify higher expected work hours given the negative effects of higher work hours on academic success and variation in the availability of work for students over time according to the economic cycle. Other factors linked to race and class, including the extent of a person's social network, are known to influence one's odds of finding a job (Ritter & Taylor, 2011; Granovetter, 1973).

Year-round employment for 15 hours per week at California's current minimum wage would provide the student with $7,600 in after-tax income to support their education. A 2015 survey of Wisconsin low-income students who live at home found that 75 percent cover their own food costs and 39 percent pay rent (Goldrick-Rab & Kendall, 2016). Given these financial obligations and unevenness in the availability of full-time jobs across business cycles and socio-economic groups, I do not presume that students could save greater amounts from longer hours of paid employment outside of the school year. As we saw in Table 1, parental contributions for households with less than $48,000 in income tend to be near zero, reflecting federal EFC formulas. For students from such households, a combination of federal and state aid would cover all remaining college and minimum cost-of-living expenses beyond expected paid employment earnings of $7,600 annually. For students with more than $48,000 in household income, remaining costs would be covered by a combination of grant aid and their parents' contributions.

Conclusions

We have seen that low- and middle- income students commonly experience hardships both during and after college in the form of excessive paid employment during school, skipped meals, anxiety about debt, and failure to repay any principal in the three years after college. Based on two methods, I have estimated that a student out-of-pocket cost maximum of $4,700 to $7,600 would be effectively debt free.

Because of current reliance by low-income students on excessive levels of work in addition to debt, especially at CSU and community colleges, debt free out-of-pocket costs are more likely to be equitable if they are based on how much students can contribute by working a reasonable number of hours in paid employment. With less robust institutional grant aid than their UC counterparts, CSU students likely rely on excessive work hours in place of some student debt. Replacing current CSU borrowing with grant aid may then preserve worse patterns of excessive paid employment at CSU than at UC. Relatedly, we cannot estimate a debt-free out-of-pocket cost for community colleges by backing out current levels of borrowing because community college students rarely borrow but work far more hours than is optimal for academic success.

But if debt free out-of-pocket costs are to be based on a reasonable work earnings estimate, then it is even more important to use accurate estimates of cost of attendance that include all living expenses when calculating grant aid awards. Otherwise, there will be a persistent gap between the size of financial aid awards, students' reasonable earnings, and what college really costs. Current measures of cost of attendance do not accurately include all living expenses (La Rocque, 2016). The upcoming SEARS survey and administrative data from California's public higher education systems could provide the improved measures we need to make sure cost of attendance estimates include all living expenses for all types of students. Further research should assess if these data sources in fact capture all living expenses or need to be improved. Changes to IPEDS' measurement of living expenses could also provide a valuable tool for accurately estimating actual costs of attendance before and after grant aid awards.

Beyond these findings, two principles should be kept in mind when deciding what actual out-of-pocket college costs for students should be under any student aid reform. The first principal is *do no harm*. Any reforms should avoid creating new college cost problems that do not currently exist. In line with this principle, any reforms should particularly not involve more students relying on student loans at community colleges or CSU where student loan repayment rates are as low as 30 percent.

The second principal is that *policy creates politics* (Pierson, 1993). Political backlashes against tuition hikes and UC in-state enrollment cuts offer useful lessons on the relationship between policy and politics. The backlash to tuition hikes conforms to a broader pattern in which social benefits engender greater political support when they are easier for recipients to understand (Mettler, 2011). Any financial aid reform that involves a nominally higher actual college cost for students from middle income households is likely to generate political backlash that will undermine policy passage and survival. Conversely, a policy that visibly reduces the maximum actual cost is more likely to benefit politically from support from organized student organizations, labor unions, and their champions in the legislature (Eaton, 2017).

The recent backlash against in-state enrollment cuts meanwhile illustrates how broader-based social programs such as Medicare and Social Security tend to gain stronger political support because larger majorities, including middle class residents, perceive their own benefits from the program. Decreased in-state enrollment at UC Berkeley and UCLA was justified as a way to preserve quality and affordability by making space for more out-of-state students who would pay higher tuition rates and subsidize financial aid for low-income students (Eaton, 2015). But state representatives were then able to tap into anger among middle class residents who perceived in-state enrollment cuts as squeezing their children out of UC admissions. Whether this is true or not is immaterial. What matters is that the policy contributed to this perception.

Financial aid reform will be more durable and likely to expand in the future if new consolidated financial aid programs are perceived as broadly accessible to students from both low- and middle- income backgrounds. At least at UC, nearly 60 percent of students borrow in the $56,000 to $112,000 income category. There is a large drop off in the frequency of borrowing above that income level. At CSU, students from households with over $75,000 in income (the highest available category) fail to repay any principal after three years around 30 percent of the time, almost as commonly as students with $30,000 to $75,000 in household income. This suggests that middle-income students, below the $112,000 income threshold, would also benefit substantially from reducing out-of-pocket college costs and borrowing.

Under such a debt free arrangement, students could still have the option to take out loans to reduce their amount of paid employment to focus on their studies or to cope with financial stresses such as unusual medical costs, eviction, or other unanticipated misfortunes that can occur during college. Such debt free arrangements would resemble some European financial aid systems (Garritzmann, 2016). Consistent with the policy creates politics principle, a debt free financial aid reform in California is more likely to enjoy the political durability seen in European financial aid systems. There is also some evidence that while not a debt-free program, Tennessee's tuition-free community college program has had the additional benefit of psychologically encouraging more capable students to enroll who would have otherwise foregone college (Chen, 2017).

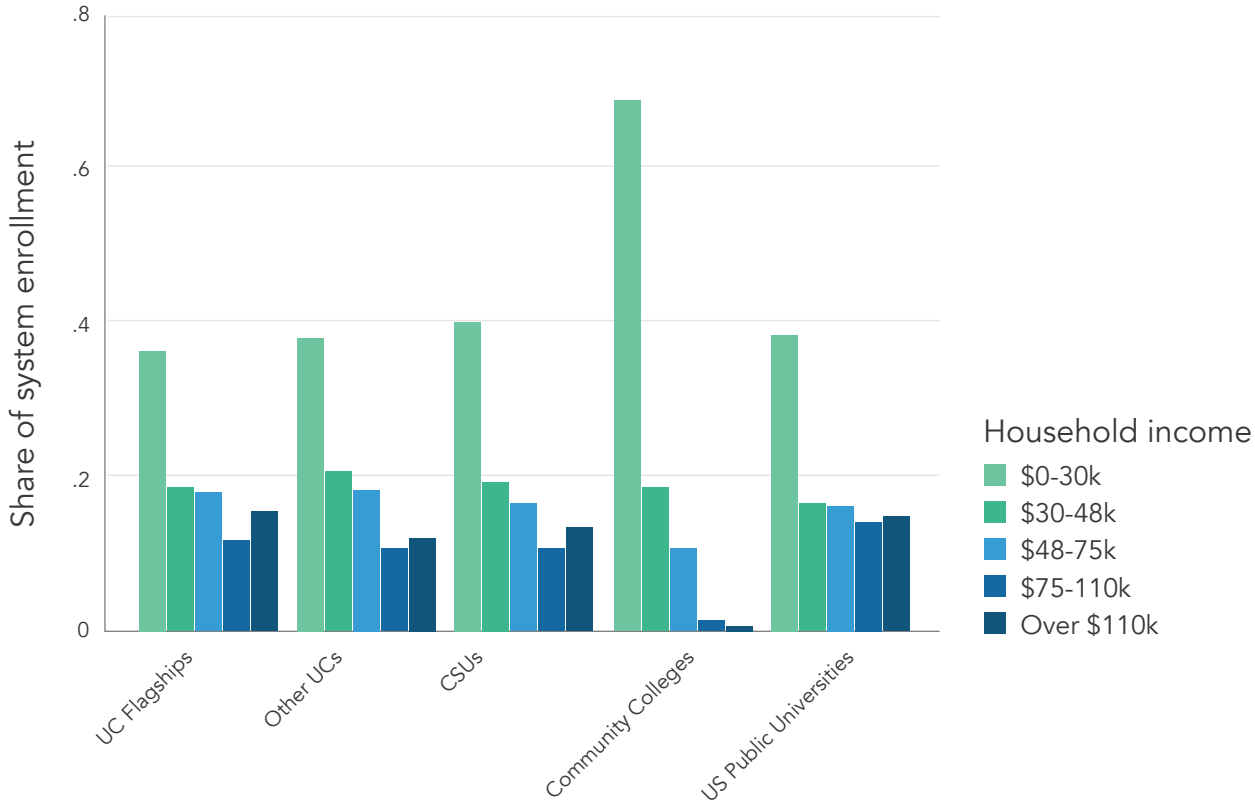
The most obvious benefit of debt free college, however, is that it would level the playing field between wealthy and lower-income students when they leave college and enter the work force. As we have seen, parental wealth currently helps the vast majority of wealthy students in California to take on no debt. If low- and middle- income students were also unencumbered by debt after college, they may be in a better position to pursue graduate study, buy a home, or secure credit to invest in a small business. This is why providing debt free college for all Californians could set a new example for how public higher education could make a state both more egalitarian and more economically dynamic.

Table 1: Estimated 2017 Student Debt Free Out-of-Pocket Costs

	CSU $0-$30k	UC $0-$30k	UC $30-$48k	UC $48-$75k	UC $75-$112k
Current combined student and parent out-of-pocket costs	$10,811	$10,033	$10,738	$13,753	$20,762
Current average student borrowing to be replaced with grant aid	-$5,296	-$5,361	-$5,361	-$5,361	-$5,361
Average parental contribution	-$0	-$0	-$705	-$3,720	-$10,729
Debt free student out-of-pocket cost	$5,515	$4,672	$4,672	$4,672	$4,672

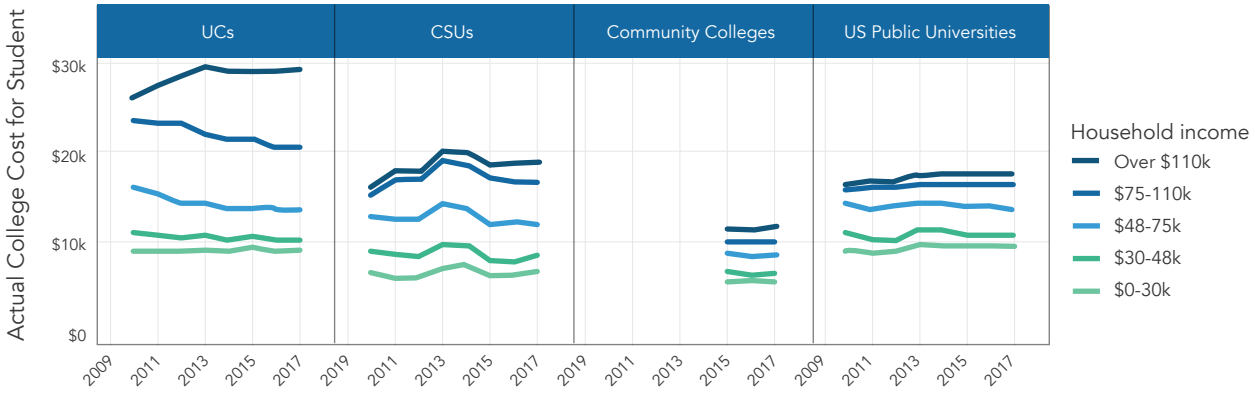
Notes: Current combined student and parent out of pocket costs for households with less than $30,000 in income are from "What College Costs for Low-income Californians," discussed and cited in the body of this manuscript. Combined out-of-pocket costs at UC for households with more than $30,000 are from IPEDS net cost data. Current average borrowing is based on the average borrowing for a full-time first year student in IPEDS at CSUs and at UC campuses other than UC Berkeley and UCLA, where average borrowing data in IPEDS is distorted because more than 20 percent of first-year students are from out of state. Debt free student out-of-pocket cost is calculated by subtracting current borrowing from current out-of-pocket costs for students from households with less than $30,000 in household income for whom EFC parental contributions are zero. This debt free out-of-pocket cost is then assigned to all other income groups and subtracted from current combined out of pocket costs to estimate average parental contributions. (Alternatively, average parental contribution could be calculated using federal EFC figures, or from data that could be collected by surveys.)

Figure 1: Shares of Students from Household Income Groups by College System



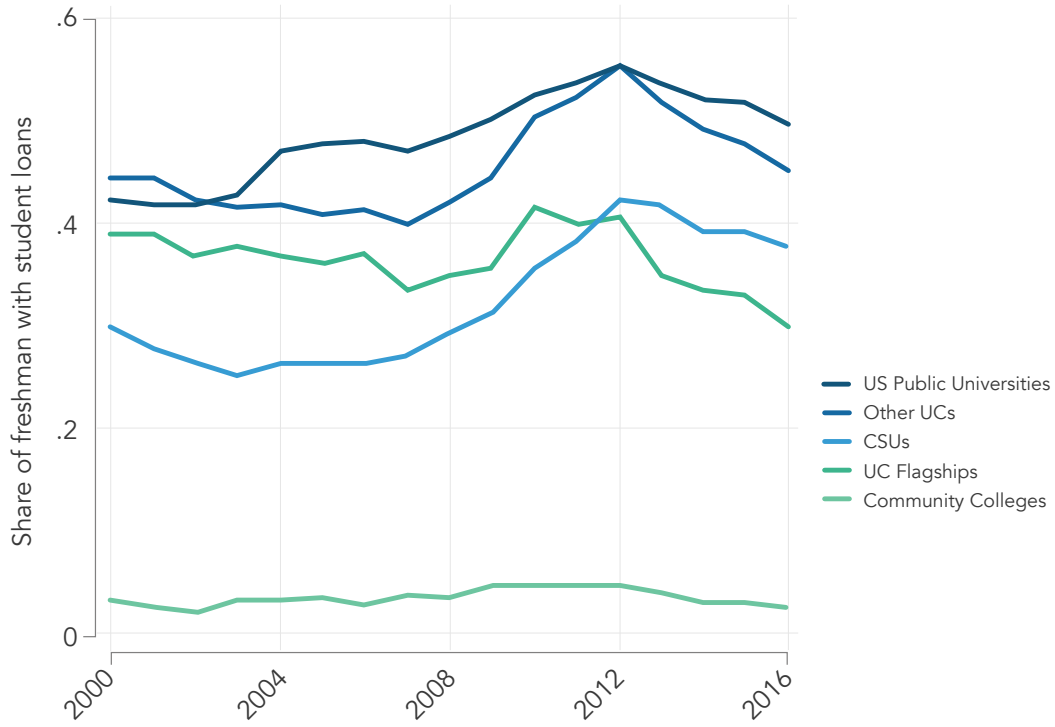
Notes: Data from Integrated Postsecondary Education Data System (IPEDS) Student Financial Aid Survey. Household income groups include both independent and dependent students.

Figure 2: College Costs for Students by Income Group and College System



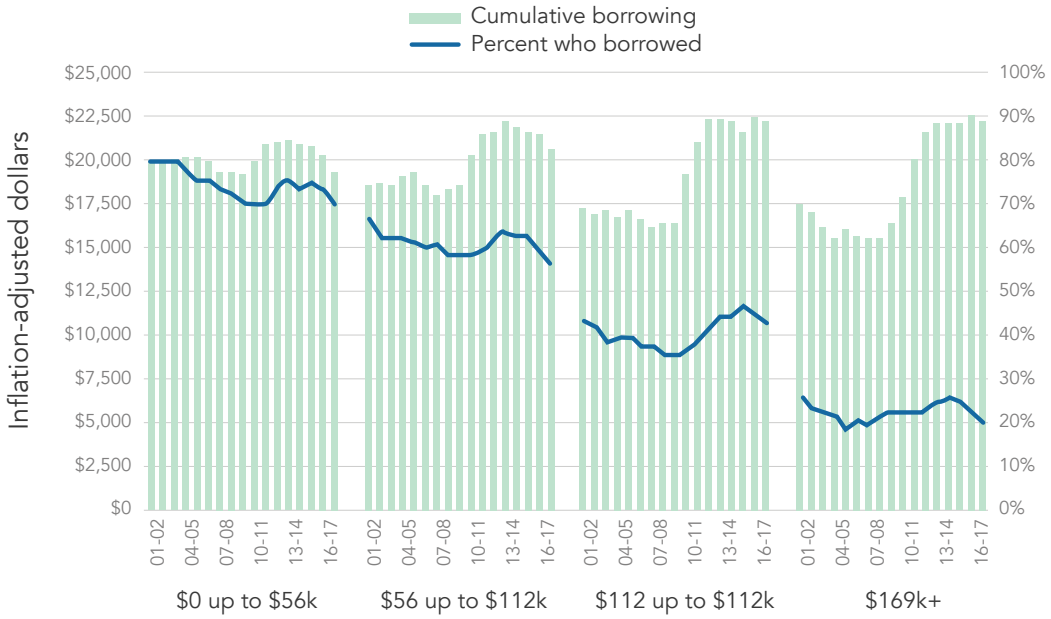
Notes: Data from Integrated Postsecondary Education Data System (IPEDS) Student Financial Aid Survey. Household income groups include both independent and dependent students.

Figure 3: Share of full-time, first-year students taking out student loans



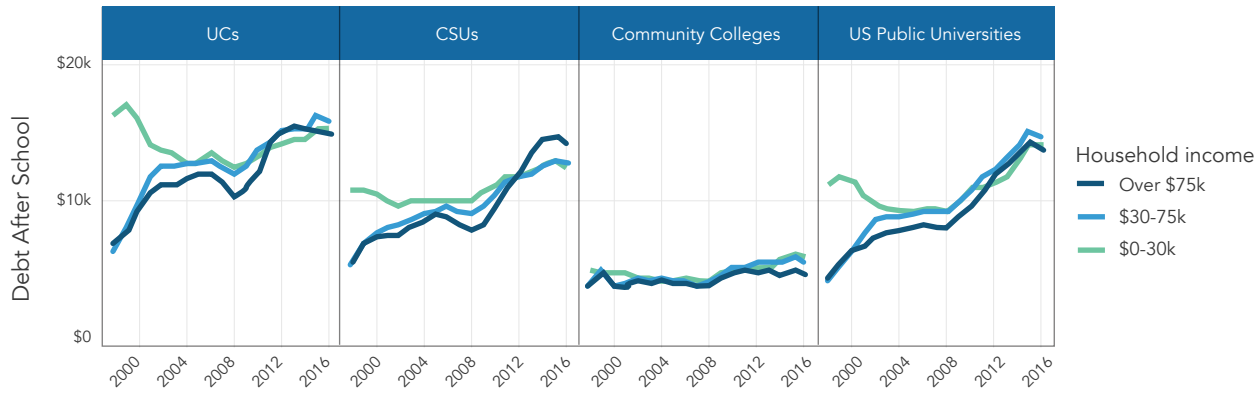
Notes: Data from IPEDS Student Financial Aid Survey.

Figure 4: Student loan borrowing rates and average debt amounts by income category



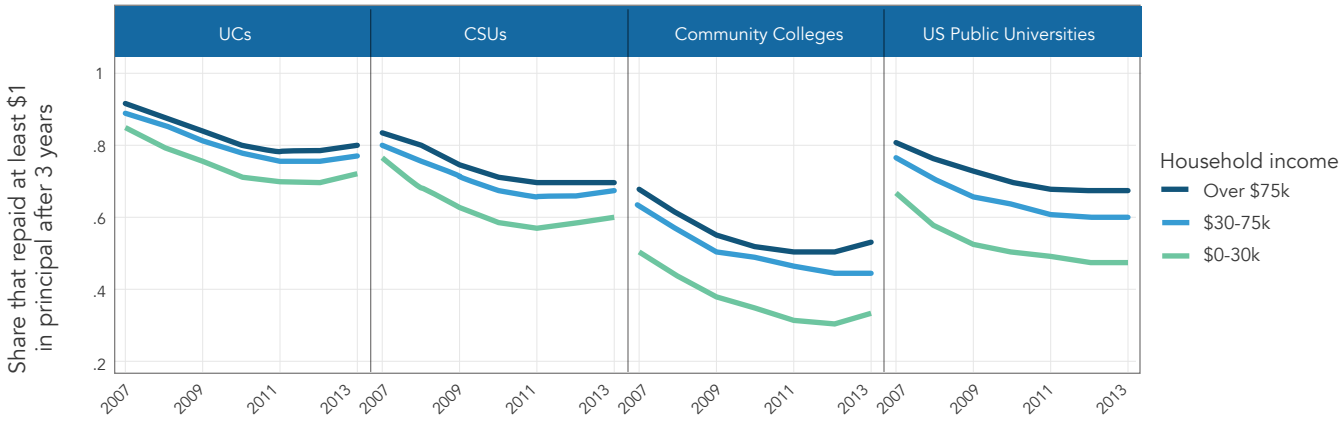
Notes: Figure used with permission from UC Office of the President. Data from UC Corporate Student data system.

Figure 5: Average federal student loan debt upon leaving school by system and income groups



Notes: Data from College Scorecard database of aggregated National Student Loan Data System Data. Median student debt by income group is reported at the school level. Estimates in the figure take the mean of school level medians for each system in a given year.

Figure 6: Average 3-year federal loan repayment rates by system and income groups



Notes: Data from College Scorecard database of aggregated National Student Loan Data System Data. The loan repayment rate is the ratio of students who have left school and entered repayment (thereby not continuing in graduate or other studies) and 1) have repaid at least $1 dollar in principal after 3 years and 2) not defaulted on their loans. The median loan repayment rate by income group is reported at the school level. Estimates in the figure take the mean of school level medians for each system in a given year.

Figure 7: Hours of employment, by income group

Notes: Boxplots use SERU survey data and are used with permission from Lapid and Douglas, "College Affordability and the Emergence of Progressive Tuition Models: Are New Financial Aid Policies at Major Public Universities Working?" Estimates are for those students who reported working. For UC dependent students below $125,000 in household income, 45 percent reported paid employment. For UC dependent students with household income over $125,000, 40 percent reported paid employment. For UC independent students, 54 percent reported paid employment.

ENDNOTES

[1] UC data uses a $112,000 threshold. One national study uses a $115,000 threshold to arrive at a similar finding (Houle, 2013).

[2] These estimates simply take the average of the out-of-pocket costs for the nine colleges reported on for each system (The Institute for College Access and Success [TICAS], 2017).

[3] Author's calculations.

[4] Studies have also found high default rates for community college borrowers (Looney & Yannelis, 2015).

[5] In the next section, I will explain why we should instead lean more heavily on estimated earnings from appropriate hours of work to estimate community college debt free out-of-pocket costs. Research has been done on appropriate work hours (King, 2002; Arum & Roska, 2011; Ehrenberg & Sherman, 1987; Stinebrickner & College, 2014).

[6] This estimate is the average of the out-of-pocket costs for the nine UC undergraduate campuses (TICAS, 2017).

REFERENCES

Alvarez, P. (2016, July 6). Clinton takes a page from Sanders's college plan. *The Atlantic*. Retrieved from https://www.theatlantic.com/politics/archive/2016/07/bernie-sanders-hillary-clinton-college-tuition/490142/

Armstrong, E. A. & Hamilton, L. T. (2013). Paying for the party: How college maintains inequality. Cambridge, MA: Harvard University Press.

Arum, R. & Roksa, J. (2011). Academically adrift: Limited learning on college campuses. Chicago, IL: University of Chicago Press.

Babcock, P. & Marks, M. (2011). The falling time cost of college: Evidence from half a century of time use data. *The Review of Economics and Statistics, 93*(2), 468–78.

Berman, E. P. & Stivers, A. (2016). Student loans as a pressure on U.S. higher education. *Research in the Sociology of Organizations 46*(1), 129–60;

Bound, J., Lovenheim, M., & Turner, S. (2009). Why have college completion rates declined? An analysis of changing student preparation and collegiate resources. Washington, DC: National Bureau of Economic Research.

Bozick, R. (2007). Making it through the first year of college: The role of students' economic resources, employment, and living arrangements. *Sociology of Education, 80*(3), 261–85. doi:10.1177/003804070708000304

California Community Colleges Chancellor's Office. (2017, September 19). California community colleges announce the most expansive "college promise" program in the nation. Retrieved from https://californiacommunitycolleges.cccco.edu/Portals/0/DocDownloads/PressReleases/SEPT2017/PR-BOG-Fee-Waiver-Name-Change-09-19-2017.pdf

California State Student Association & The Institute for College Access & Success (2017). Where debt comes due at CSU: Unequal debt burdens among California State University graduates. Retrieved from https://ticas.org/sites/default/files/pub_files/where_debt_comes_due_at_csu.pdf

Chen, D. W. (2017, May 14). Free tuition? Tennessee could tutor New York. *The New York Times*. Retrieved from https://www.nytimes.com/2017/05/14/nyregion/for-cuomos-free-tuition-plan-lessons-from-tennessee.html

Chen, D. W. (2017, August 25). 75,000 apply for state college scholarships, but many won't qualify. *The New York Times*. Retrieved from https://www.nytimes.com/2017/08/25/nyregion/excelsior-college-scholarship-program-new-york.html

Cochrane, D. & Ahlman, L. (2017). College costs in context: A state-by-state look at college (un)affordability. *The Institute for College Access and Success*. Retrieved from https://ticas.org/sites/default/files/pub_files/college_costs_in_context.pdf

Cochrane, D. & Szabo-Kubitz, L. (2016a). On the Verge: Costs and tradeoffs facing community college students. *The Institute for College Access and Success*. Retrieved from https://ticas.org/sites/default/files/pub_files/on_the_verge.pdf

Cochrane, D. & Szabo-Kubitz, L. (2016b). States of denial where community college students lack access to federal student loans. *The Institute for College Access and Success*. Retrieved from https://ticas.org/sites/default/files/pub_files/states_of_denial.pdf

College Board. (n.d.) Distribution of outstanding federal direct loan dollars and recipients by repayment plan. *Trends in Higher Education*. Retrieved from https://trends.collegeboard.org/student-aid/figures-tables/distribution-outstanding-federal-direct-loan-dollars-and-recipients-repayment-plan

Douglas, J. A. & Bleemer, Z. (2018). Approaching a tipping point? A history and prospectus of funding for the University of California. *Center for Studies in Higher Education.* Retrieved from https://cshe.berkeley.edu/publications/approaching-tipping-point-history-and-prospectus-funding-university-california-john

Dwyer, R. E., Hodson, R., & McCloud, L. (2013). Gender, debt, and dropping out of college. *Gender and Society, 27*(1), 30–55.

Dwyer, R. E., McCloud, L., & Hodson, R. (2012). Debt and graduation from American universities. *Social Forces, 90*(4), 1133–55

Eaton, C. (2015). Financial and resident enrollment trends at the University of California [Invited testimony]. Sacramento, CA: California State Legislature.

Eaton, C. (2017). Still public: State universities and America's new student-debt coalitions. *Political Science and Politics, 50*(2). doi:10.1017/S1049096516002912.

Eaton, C. (n.d.). *Bankers in the ivory tower: The rise of finance in U.S. higher education and society* (Unpublished). University of California, Merced.

Eaton, C., Kulkarni, S.,Birgeneau, R., Brady, H., & Hout, M. (2017). Affording the dream: Student debt and state need-based aid for low-income public university students. *Center for Studies in Higher Education Research & Occasional Paper Series.* Retrieved from https://cshe.berkeley.edu/publications/affording-dream-student-debt-and-state-need-based-grant-aid-public-university-students

Ehrenberg, R. G. & Sherman, D. R. (1987). Employment while in college, academic achievement, and postcollege outcomes: A summary of results. The Journal of Human Resources, 22(1), 1-23. doi:10.2307/145864

Fourcade, M. & Healy, K. (2013). Classification situations: Life-chances in the neoliberal era. *Accounting, Organizations and Society, 38*(8), 559–72.

Garritzmann, J. L. (2016). The political economy of higher education finance: The politics of tuition fees and subsidies in OECD countries, 1945–2015. Basingstoke, U.K.: Palgrave Macmillan.

Goldrick-Rab, S. & Kendall, N. (2016). The real price of college. *The Century Foundation.* Retrieved from https://tcf.org/content/report/the-real-price-of-college/?agreed=1

Goldrick-Rab, S. (2016). Paying the price: College costs, financial aid, and the betrayal of the American dream. Chicago, IL: University of Chicago Press.

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology, 78*(6), 1360–80. doi:10.1086/225469.

Hamilton, L. T. (2016). Parenting to a degree: How family matters for college women's success. Chicago, IL: University of Chicago Press.

Houle, J. N. & Berger, L. (2015). Is student loan debt discouraging homeownership among young adults? Social Service Review 89(4), 589–621. doi: 10.1086/684587

Houle, J. N. (2013). Disparities in debt: Parents' socioeconomic resources and young adult student loan debt. *Sociology of Education 87* (1), 53–69.

Hout, M. Social and economic returns to college education in the United States. *Annual Review of Sociology, 38,* 379–400.

King, J. E. (2002). Crucial choices: How students' financial decisions affect their academic success. Washington, DC: Center for Policy Analysis.

Koseff, A. (2017, September 5). 'Free college' is a new rallying cry in California. *The Sacramento Bee.* Retrieved from https://www.sacbee.com/news/politics-government/capitol-alert/article170750517.html

La Rocque, M. (2016, May 24). Federal cost data for students living at home are significantly understated [Blog]. *The Institute for College Access and Success.* Retrieved from https://ticas.org/blog/federal-cost-data-students-living-home-are-significantly-understated

Lapid, P. A. & Douglas, J. A. (2016). College affordability and the emergence of progressive tuition models: Are new financial aid policies at major public universities working? *Center for Studies in Higher Education Research & Occasional Paper Series.* Retrieved from https://cshe.berkeley.edu/publications/college-affordability-and-emergence-progresssive-tuition-models-are-new-financial-aid

Leal, F. (2017, January 31). Creating a debt-free college program would cost state an estimated $3.3 billion. *EdSource.* Retrieved from https://edsource.org/2017/creating-a-debt-free-college-program-would-cost-state-an-estimated-3-3-billion/576439

Legislative Analyst's Office. (2017). Cal Grant recipients. Retrieved from https://lao.ca.gov/Education/EdBudget/Details/64

Looney, A. & Yannelis, C. (2015). A crisis in student loans? *Brookings Papers on Economic Activity.* Retrieved from https://www.brookings.edu/bpea-articles/a-crisis-in-student-loans-how-changes-in-the-characteristics-of-borrowers-and-in-the-institutions-they-attended-contributed-to-rising-loan-defaults/

Mason, M. & Watanabe, T. (2017, March 13). California Democrats unveil a sweeping financial aid plan to help students avoid debt. T*he Los Angeles Times.* Retrieved from http://www.latimes.com/politics/la-pol-sac-debt-free-college-20170313-story.html

Mettler, S. (2005). *Soldiers to citizens: The G.I. Bill and the making of the greatest generation.* Oxford, U.K.: Oxford University Press.

Mettler, S. (2011). The submerged state: How invisible government policies undermine American democracy. Chicago, IL: University Of Chicago Press.

Mettler, S. (2014). *Degrees of inequality: How higher education politics sabotaged the American dream.* New York, NY: Basic Books.

Pierson, P. (1993). When effect becomes cause: Policy feedback and political change. *World Politics, 45*(4), 595–628.

Ritter, J. A. & Taylor, L. J. (2011). Racial disparity in unemployment. *The Review of Economics and Statistics, 93*(1), 30–42.

Shireman, R. (2017). Learn now, pay later: A history of income-contingent student loans in the United States. *The Annals of the American Academy of Political and Social Science, 67*1(1), 184–201.

Stinebrickner, R. & College, B. (2014). Working during school and academic performance. *Journal of Labor Economics, 21*(2), 473-491.

The California State University. (n.d.). State university grant (SUG) program. Retrieved from https://www2.calstate.edu/attend/paying-for-college/financial-aid/types/Pages/state-university-grant-program.aspx

The Institute for College Access and Success. (2017). What college costs for low-income Californians. Retrieved from https://ticas.org/sites/default/files/pub_files/what_college_costs_for_low-income_californians.pdf

U.S. Census Bureau. (n.d.). Household income in the past 12 months (In 2005 inflation-adjusted dollars). Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_05_EST_B19001&prodType=table

U.S. Department of Education. (n.d.). Income-driven plans. *Federal Student Aid.* Retrieved from https://studentaid.ed.gov/sa/repay-loans/understand/plans/income-driven

CREATING AN AFFORDABLE COLLEGE MODEL FOR CALIFORNIA

By Amy Rose

Overview

Historically, the state paid most of the cost of higher education at California's public institutions: the University of California (UC), the California State University (CSU) and the California Community Colleges (CCC). However, years of budget cuts and tuition hikes have shifted more of the cost to students and families, especially at the state's four-year institutions: the UC and the CSU. This cost-shift undermines California's commitment to higher education – as outlined in the Master Plan for Higher Education – and potentially puts the state's economic future at risk. It also means that more students are graduating with increasing amounts of student loan debt and working excessive hours that impact their ability to graduate on time, while others are forgoing higher education altogether. A well-educated workforce is critical to California's future prosperity. Yet, at current rates, California will not produce enough college graduates to meet the demands of the state's economy in the years ahead.

In order to reduce this shortage, reforms must be made to ensure all students have access to an affordable higher education that will prepare them to enter the workforce with the skills they need to be successful. One of the greatest challenges for students seeking a higher education, and one of the greatest opportunities for reform, is the structure of the financial aid system. Currently, most state student financial aid is linked primarily to tuition and largely fails to assist students with other major costs of college attendance, including housing, food, and transportation. Understanding the full cost of college is essential for decision-makers, advocates, and others who seek to expand college opportunities for low- and middle-income students.

This analysis estimates the cost of implementing a state need-based financial aid program designed to enable all qualified Californians to attend full time for undergraduate study at any of the three public systems – eliminating the need for students to take out loans or work unmanageable hours (Chetty, Friedman, Saez, Turner, & Chetty, 2017). This analysis provides two models for an affordable college program in California. One model estimates the costs of a "shared responsibility" program in which the state covers students' remaining unmet financial need after taking into account selected federal grants, an expected parent contribution, and an expected student contribution from work earnings. The second model estimates the costs of a "government responsibility" program in which the state covers students' remaining unmet financial need after taking into account only selected federal grants, with no student or parent contribution.

Key Assumptions

This analysis relies on several key assumptions regarding enrollment, cost of attendance (which includes tuition and living costs), Expected Family Contribution (EFC), and financial aid. First, it assumes coverage for California resident students who attend college full-time (12 units or more per semester) as an undergraduate at one of the state's public colleges, based on 2018-19 projected enrollment. Projected enrollment at the UC is 170,000; at the CSU, 340,000; and at the CCC, 450,000. This analysis uses full-time enrollment figures to weight per-student costs by housing type (on-campus, off-campus, or with family), dependency status

(dependent or independent), and income (low-income, middle-income, or high-income).

Cost estimates for each segment (UC, CSU, and CCC) are provided, and the total state cost is weighted by institutional enrollment. Among the 85% of California students who attend the state's public colleges, 11% of students attend the UC, 23% attend the CSU and 66% attend the CCC. This analysis provides estimates for a new statewide financial aid system based on current costs (2018-19) and does not take into account how long it takes students to complete an undergraduate degree, which would likely decline under the new financial aid model due to it facilitating full-time enrollment for more students.

There are several limitations that complicate this analysis. First, this analysis assumes enrollment figures as outlined above; however, enrollment at the CCC is likely to grow based on the new financial aid system outlined here, in addition to enrollment growth likely to stem from the state's plan to create a new online community college. These potential changes are not reflected in the estimates. An additional analysis could estimate the behavioral changes associated with changes in financial aid design as well as account for the thousands of students that are currently turned away each year at the UC and CSU due to capacity limitations (Rose, 2018). This analysis also assumes non-tuition and fee costs (such as housing and food) are constant across the state, although living costs – especially housing costs – vary significantly by region. If warranted, further analysis could provide regional cost estimates, a question that Robert Kelchen explores elsewhere in this publication.

This analysis provides two possibilities with regard to financial contributions from the student and family. The shared responsibility model assumes that students work part-time during the academic year and full-time during summer and that earnings from their work contribute to paying for their cost of attendance. This model also assumes a financial contribution from the student's family (an EFC), which varies based on income. The government responsibility model assumes zero contribution from students and family.

The financial aid system envisioned here assumes that current levels of federal, state, and institutional aid are available. In calculating the total state cost of a new financial aid system, this analysis assumes all eligible students receive federal student aid from the Pell Grant and the Supplemental Educational Opportunity Grant. Aid amounts reflect national median awards for dependent and independent students at public colleges. State aid refers to aid that is administered by the California Student Aid Commission (CSAC) and includes aid from Cal Grants and Middle Class Scholarships. Institutional aid refers to need-based financial aid that is administered at the institutional level such as the University Grant at UC and the Promise Grant at CCC.

Methodology

This analysis provides preliminary estimates on a per-student, per-sector, and per-state basis. All figures are inflation-adjusted to 2018-19 using the Consumer Price Index for California. The estimates regarding 1) the costs of college and 2) paying for college are based on the most recent data available from multiple sources. The Costs of College section consists of instructional costs such as tuition and fees, and living costs such as housing and food. The Paying for College section includes federal gift aid, expected family contribution, and earnings from student work.

Costs of College

Students pursuing a college degree face two main costs: tuition and fees charged by the institution, and student-related living expenses such as housing, food, transportation, and books and supplies (often referred to as "non-tuition and fees").

Tuition and Fees

Tuition varies considerably depending on the type of institution a student attends. This analysis uses 2018-19 undergraduate resident tuition and fees for the regular academic year at the state's three public higher education sectors. Tuition and fees for academic year 2018-19 are about $14,400 at UC, $7,300 at CSU, and $1,100 at CCC.

Living Costs

This analysis relies primarily on CSAC's 2018-19 Student Expense Budgets for costs for food, off-campus housing, transportation, and personal expenses (California Student Aid Commission [CSAC], 2018). Books and supplies costs come from CSAC as well as the sectors' own cost of attendance surveys. The Student Expense Budgets do not estimate the cost of on-campus food and housing; therefore, these estimates come from the institutional sectors.

Housing costs are the greatest expense students face and vary significantly across the state. Because the majority of aid recipients at UC and CSU are dependent, this analysis assumes that all students live at home, rent-free, with parents or family during the summer. Of course, many students do not have access to rent-free summer accommodations and must rely on earnings from work or other sources to cover their living expenses.

Paying for College

This analysis incorporates three financial resources that help students to cover the cost of college: students' earnings from work, an expected family contribution (EFC) and financial gift aid (federal, state, and institutional).

Students' Earnings From Work

The shared responsibility model calculates how much students could contribute to their college costs through potential earnings from work. Many students, particularly low-income students, rely on a job to help pay for college. Research suggests that working too many hours is detrimental to student success, while working a moderate number of hours may be helpful (Dundes & Marx, 2006). This model assumes that all students work 15 hours per week at California minimum wage ($11 per hour) during the academic year, and 40 hours per week at the minimum wage during the summer. After accounting for state and federal taxes, as well as some summer living expenses, students are assumed to contribute net earnings of approximately $7,000 per year towards their college costs. While this model bases the student contribution on manageable earnings from work, some students may prefer to borrow through student loans. This analysis does not factor merit-based aid or private gift aid into the calculation, however, any aid students acquire through these avenues can be applied towards their portion of the EFC.

Expected Family Contribution

Expected Family Contribution (EFC) refers to the amount a family and student are estimated to be able to contribute toward college expenses. The EFC formula is typically based on a federal formula that takes into account the income and assets of a student and his or her family. The formula differs based on a student's dependency status.

The shared responsibility model uses national median EFC figures to calculate the estimated parent contribution by income and dependency status. The federal EFC formula includes an income protection allowance of $6,750 for dependent students, meaning this income is not counted against their EFC contribution. This analysis adjusts dependent students' EFC and earnings from work contribution to account for the portion of income that is not included in the federal income protection allowance. This adjustment is not made for independent students because the income protection allowance for independent students is greater than the amount of earnings this analysis assumes students to contribute. The government responsibility model assumes zero EFC.

Financial Aid

Students can receive help paying for college through a combination of gift aid (such as grants, scholarships, and tuition waivers); loans; tax credits and deductions; and work-study programs. Because tax credits and deductions are not immediately available to help students afford the cost of college attendance, they are excluded from this analysis. The amount of aid a student receives varies depending on his or her income and other factors; therefore, the total cost to the state depends on the assumed number of students from different income levels. This analysis uses data from the 2015–16 National Postsecondary Student Aid Study (NPSAS), which is a nationally representative sample survey of undergraduate students, to stratify students into five income categories; $0-$30,000; $30,001-$48,000; $48,001-$75,000; $75,001 - $110,000; and $110,000 and above.

Federal Gift Aid

This analysis assumes that all eligible students receive federal gift aid from the Pell Grant and the Federal Supplemental Educational Opportunity Grant (FSEOG). Many students from low-income families do not receive federal student aid because they do not fill out the Free Application for Federal Student Aid (FAFSA). This analysis assumes that every eligible student would apply for and receive federal financial aid due to increased awareness of available aid. The figures below represent average award amounts from NPSAS.

- **Pell Grant.** The Pell Grant helps ensure access to postsecondary education for low- and middle-income undergraduate students by providing grants that help meet college costs (U.S. Department of Education [ED], n.d.a). The Pell Grant is an entitlement, meaning that all eligible students receive an award. The maximum grant amount that a student is eligible for during academic year 2018-19 is $6,095, although the actual grant students receive varies depending on their EFC and enrollment intensity. This analysis assumes low- and middle-income students receive a Pell Grant award of between $3,000 and $4,000 depending on sector, income, and dependency status.

- **Federal Supplemental Educational Opportunity Grant (FSEOG).** This grant provides need-based aid to eligible undergraduate students to help reduce financial barriers to postsecondary education (ED, n.d.b). This aid is provided to students with exceptional financial need – in 2015-16, 68% of FSEOG recipients came from families with incomes of less than $30,000 (National Association of Student Financial Aid Administrators, 2018). Unlike the Pell Grant, the FSEOG is a campus-based program, which means that award amounts are determined by each campus and a student's eligibility depends on family income and on the amount of funds that the campus receives. This analysis assumes low- and middle-income students receive an SEOG award of between $200 and $400 depending on sector, income and dependency status.

Existing State Aid

In addition to federal aid and EFC, students also receive financial assistance through state financial aid and institutional aid. Since one of the goals of this analysis is to envision a new financial aid system in California, existing state aid and institutional aid is not calculated at the student level. Rather, this analysis deducts the total amount of current state and institutional aid from the costs assumed for each of the three sectors to model how much additional aid would be needed to fulfill students' unmet financial need on top of what is already available to them.

State aid refers to aid administered by CSAC and includes total undergraduate Cal Grants and Middle Class Scholarship award amounts for academic year 2017-18. These totals were not yet final; final totals will likely be higher and reduce the overall cost estimate. Cal Grants are need-based grants for students at all types of colleges who are pursuing an undergraduate degree or vocational or career training, and do not have to be repaid (CSAC, n.d.a). The Middle Class Scholarship grant provides undergraduate students with family incomes and assets up to $171,000 a scholarship to attend UC or CSU campuses (CSAC, n.d.b).

Institutional aid consists of existing need-based gift aid administered by UC, CSU, and CCC. This analysis does not include merit-based aid or private gift aid. At the UC, institutional aid reflects the University Grant, which provides assistance for tuition and nontuition costs (Legislative Analyst's Office, 2018). At the CSU, institutional aid is composed of the CSU State University Grant and the Educational Opportunity Grant. Institutional aid at the CCC consists of the Promise Grant, California Community College Completion Grant (CCCG), Full-time Student Success Grant, CARE Grant, EOPS grant, CAFYES Grant, Equity Grant, CalWorks Grants, and other institutional need-based grants.

Affordable College: Two Models

This analysis provides detailed cost estimates for a program that allows all eligible Californians to receive an affordable college education. The following section presents two models for achieving this goal: Option #1 outlines a "Shared Responsibility" in which the state and federal government cover all unmet financial need after accounting for grant aid, an expected parent contribution, and students' contribution from work earnings. Option #2 –"Government Responsibility"– assumes state and federal aid cover all unmet financial need with zero parent or student contribution. Each model displays annual costs per student and per sector.

Affordable College Models: Annual Estimates

Annual Cost of Attendance at California's Public Universities

Cost Per Student, 2018-19

	UC	CSU	CCC
Institutional Costs			
Tuition & Fees	$14,400	$7,300	$1,100
Living Costs*			
Food and Housing	$12,100	$11,500	$8,400
Books and Supplies	$1,500	$1,900	$1,000
Transportation	$1,100	$1,200	$1,200
Personal/Miscellaneous	$2,800	$3,000	$3,100
Total Living Costs	*$17,500*	*$17,600*	*$13,700*
Total Cost of Attendance Per Student	**$31,900**	**$24,800**	**$14,800**

*Figures are inflation-adjusted to 2018-19 dollars
Note: The following categories were weighted to reflect the shares of students living on-campus, off-campus, and with family: Food and Housing, Transportation, Personal/Misc. Figures are rounded to the nearest hundred and may not sum due to rounding.
Source: Budget Center analysis of data from the California State University, the California Student Aid Commission, and the University of California

California Budget & Policy Center

Option #1: Shared Responsibility

Per Student Costs, 2018-19*

	UC	CSU	CCC
Cost of Attendance	$31,900	$24,800	$14,800
Less Expected Family Contribution	*-$9,400*	*-$8,700*	*-$2,200*
Less Student Contribution	*-$7,100*	*-$7,100*	*-$7,200*
Less Federal Financial Aid	*-$2,400*	*-$2,300*	*-$1,700*

*Figures are inflation-adjusted to 2018-19 dollars
Note: Totals may not sum due to rounding.
Source: Budget Center analysis of data from the California Employment Development Department, California Student Aid Commission, California State University, National Postsecondary Student Aid Study, and University of California

California Budget & Policy Center

Affordable College Models: Annual Estimates, Continued

Option #1: Shared Responsibility

Per Sector Costs, 2018-19*

	UC	CSU	CCC
Cost of Attendance	$5.7 B	$9.3 B	$6.3 B
Less Expected Family Contribution	*-$1.7 B*	*-$3.2 B*	*-$931 M*
Less Student Contribution	*-$1.3 B*	*-$2.7 B*	*-$3.1 B*
Less Federal Aid	*-$434 M*	*-$874 M*	*-$751 M*
Less State & Institutional Aid	*-$1.8 B*	*-$1.4 B*	*-$1.0 B*
Unmet Financial Need	**$545 M**	**$1.1 B**	**$507 M**

*Figures are inflation-adjusted to 2018-19 dollars
Note: Totals may not sum due to rounding.
Source: Budget Center analysis of data from the California Employment Development Department, California Student Aid Commission, California State University, National Postsecondary Student Aid Study, and University of California

California Budget & Policy Center

Option #2: Government Responsibility

Per Student Costs, 2018-19*

	UC	CSU	CCC
Cost of Attendance	$31,900	$24,800	$14,800
Less Expected Family Contribution	*-$0*	*-$0*	*-$0*
Less Student Contribution	*-$0*	*-$0*	*-$0*
Less Federal Financial Aid	*-$2,400*	*-$2,300*	*-$1,700*

*Figures are inflation-adjusted to 2018-19 dollars
Note: Totals may not sum due to rounding.
Source: Budget Center analysis of data from the California Employment Development Department, California Student Aid Commission, California State University, National Postsecondary Student Aid Study, and University of California

California Budget & Policy Center

Affordable College Models: Annual Estimates, Continued

Option #2: Government Responsibility

Per Sector Costs, 2018-19*

	UC	CSU	CCC
Cost of Attendance	$5.7 B	$9.3 B	$6.3 B
Less Expected Family Contribution	*-$0*	*-$0*	*-$0*
Less Student Contribution	*-$0*	*-$0*	*-$0*
Less Federal Aid	*-$434 M*	*-$874 M*	*-$751 M*
Less State & Institutional Aid	*-$1.8 B*	*-$1.4 B*	*-$1.0 B*
Unmet Financial Need	**$3.5 B**	**$7.0 B**	**$4.5 B**

*Figures are inflation-adjusted to 2018-19 dollars
Note: Totals may not sum due to rounding.
Source: Budget Center analysis of data from the California Employment Development Department, California Student Aid Commission, California State University, National Postsecondary Student Aid Study, and University of California

California Budget & Policy Center

Total Cost to State Per Model

Total Affordable-College Model Costs

Dollars in Billions, 2018-19*

Option #1: Shared Responsibility	CA
Cost of Attendance	$21.4
Less Expected Family Contribution	*-$5.9*
Less Student Contribution	*-$7.1*
Less Federal Financial Aid	*-$2.1*
Less State & Institutional Aid	*-$4.3*
Unmet Financial Need	**$2.1 B**

Option #2: Government Responsibility	CA
Cost of Attendance	$21.4
Less Expected Family Contribution	*-$0*
Less Student Contribution	*-$0*
Less Federal Financial Aid	*-$2.1*
Less State & Institutional Aid	*-$4.3*
Unmet Financial Need	**$15.0 B**

*Figures are inflation-adjusted to 2018-19 dollars

California Budget & Policy Center

REFERENCES

California Student Aid Commission. (2018, August 7). 2018-19 student expense budgets. Retrieved from https://www.csac.ca.gov/sites/main/files/file-attachments/2018-19_student_expense_budget_0.pdf

California Student Aid Commission. (n.d. b.). Cal Grant programs. Retrieved from https://www.csac.ca.gov/cal-grants

California Student Aid Commission. (n.d. a.) Middle class scholarship. Retrieved from https://www.csac.ca.gov/middle-class-scholarship

Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Chetty, Y. R. (2017). Mobility report cards: The role of colleges in intergenerational mobility. *National Bureau of Economic Research*. Retrieved from http://www.equality-of-opportunity.org/papers/coll_mrc_paper.pdf

Dundes, L., & Marx, J. (2006). Balancing work and academics in college: Why do students working 10-19 hours per week excel? *Journal of College Student Retention, 8*(1), 107-120.

Legislative Analyst's Office. (2018, July). Need-based financial aid award amounts. *EdBudget Figures*. Retrieved from https://lao.ca.gov/Education/EdBudget/Details/190

National Association of Student Financial Aid Administrators. (2018, July 24). State of student aid 2018 [PowerPoint slides]. Retrieved from https://www.nasfaa.org/uploads/documents/2018_profile_slides.pdf

Rose, A. (2018, May 9). California stands to lose billions in future economic returns by continuing to underfund CSU and UC. *California Budget & Policy Center.* Retrieved from https://calbudgetcenter.org/blog/california-stands-to-lose-billions-in-future-economic-returns-by-continuing-to-underfund-csu-and-uc/

U.S, Department of Education. (n.d.) Federal Supplemental Educational Opportunity Grant (FSEOG) program. Retrieved from https://www2.ed.gov/programs/fseog/index.html

U.S. Department of Education. (n.d.) Federal Pell Grant program. Retrieved from https://www2.ed.gov/programs/fpg/index.html

INCREASING STUDENTS' AWARENESS AND UNDERSTANDING OF FINANCIAL AID

By Su Jin Gatlin Jez

Abstract

Financial constraints should not determine the opportunities available to qualified students pursuing higher education. Although policymakers intend for financial aid to address these constraints, it frequently fails to reach the students who most need assistance. Students, particularly those from low-income families and families of color, lack access to clear, accurate, and actionable information regarding financial aid, which impacts their perceptions of college as a viable option. Improving the quality and availability of financial aid information will increase educational outcomes among traditionally underserved and underrepresented groups. I recommend reforms that can be made more easily, such as standardizing terms used in financial aid documents. I also recommend deeper reforms that require a greater shift in the provision of financial aid, such as shifting the mindsets of financial aid administrators and staff from a compliance focus to a student-centered focus and including underserved students and their families in the development of financial aid policies and processes. These changes will increase students' awareness and understanding of financial aid and, thus, increase their access to college.

Students' Awareness and Understanding of Financial Aid Critical to Improving Educational Outcomes

Financial constraints should not determine the opportunities available to qualified students pursuing higher education. Yet research consistently finds that financial factors do affect student decisions (Mendoza, Medez, & Malcolm, 2009; Dowd & Coury, 2006; Goldrick-Rab, 2006). Although the Higher Education Act of 1965 sought to address financial barriers in higher education, financial aid frequently fails to reach the students who most need assistance. Approximately 40% of all undergraduates (about 8.4 million students) did not receive financial aid in 2008. Among these were nearly 2.3 million students from low-income families who would have qualified for a Pell Grant had they applied for financial aid (Kantrowitz, 2009). The number of students who do not apply has only been increasing over time (King, 2004; Tierney & Venegas, 2009). In California, 42,000 students eligible for state financial aid never completed their applications, leaving them without state financial aid; and approximately 15% of the 33% students eligible for the state's largest award (the Cal Grant A) actually claimed it (Tierney & Venegas, 2009). Even of those who do complete the financial aid process, 55% apply after the common state and institutional aid deadline of April 1st, which leaves them receiving less than they would have received if they applied on time (King, 2004).

Research suggests that this gap in financial aid access stems from a lack of clear, consistent, and accurate messaging (Castleman & Page, 2016; Bird & Castleman, 2016; Hoxby & Turner, 2015; Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2012; Carrell & Sacerdote, 2017). Students and their families often underestimate the availability of financial aid while also overestimating the cost of college (Goldrick-Rab,

2006; Zarate & Pachón, 2006). This causes many students to form negative misconceptions regarding their higher education opportunities and severely limits the likelihood that these students will access and complete college. The poor messaging also disproportionately affects students from low-income families and families of color, as these students are more likely to be first-generation and therefore have less access to accurate information concerning college costs and financial aid (Gladieux, 2004; Grodsky & Jones, 2007). If students and their families do not receive clear messaging on financial aid opportunities, then financial aid will remain underutilized and many students will unfairly be denied access to higher education.

When students are unable to access financial aid, they are less likely to enroll in college (Dynarski & Scott-Clayton, 2013; Bettinger et al., 2012). Moreover, barriers to financial aid disproportionately impact students from low-income families and families of color. These underserved students and their families have less knowledge about college, are more likely to overestimate the cost of college, and underestimate the amount of financial aid available. As such, they may incorrectly assume that they cannot afford college and subsequently choose not to enroll (Goldrick-Rab, 2006; Kirst & Venezia, 2004; Zarate & Pachón, 2006).

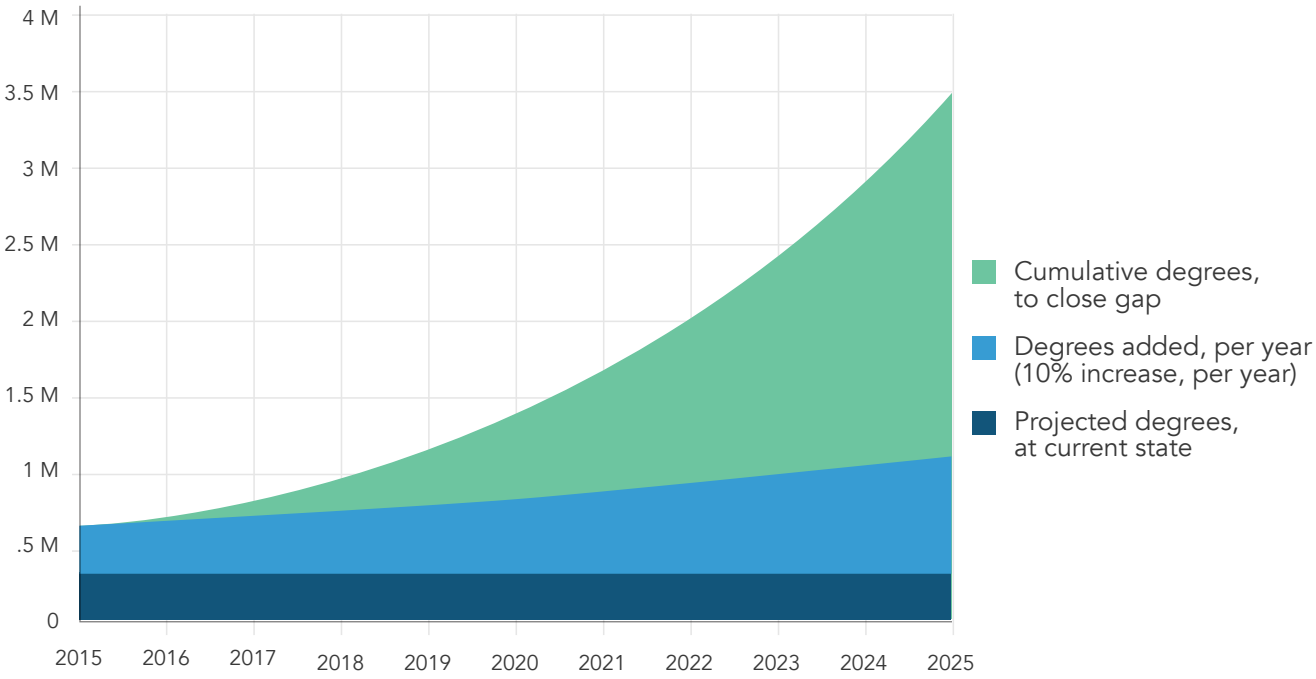
Students who do not attend college forego significant and growing economic, social, and health returns of a college degree (Brand & Xie, 2010; Card, 1995; Carnevale, Rose, & Cheah, 2011; Cellini & Chaudhary, 2014; Goldin & Katz, 2007; Hout, 2011; Jepsen, Troske, & Coomes, 2009; Kane & Rouse, 1993; Kane & Rouse,1995; Lemieux & Card, 2001; Oreopoulos & Salvanes, 2011; Public Policy Institute of California, 2017). Focusing on labor market outcomes, high school graduates earned about $38,000 annually, compared to $61,000 for those with a bachelor's degree; and those with only a high school diploma were nearly two times more likely to be unemployed than those with a bachelor's degree (2.5% compared to 4.6%) (Bureau of Labor Statistics, 2018). In California, workers with a bachelor's degree earned about 70% more than workers in similar roles but with a high school diploma – this is an increase from 2005 when workers with a bachelor's degree earned about 60% more than those with a high school diploma (Public Policy Institute of California, 2017). Moreover, returns to higher education are greatest for those who are the least likely to earn a degree, such as those from the most disadvantaged backgrounds (Brand & Xie, 2010; Hout, 2011).

Not only is a postsecondary education increasingly critical for an individual's quality of life, it is critical for the continued growth of the US and California's economy. The US economy's demand for highly educated professionals has been growing faster than supply (Carnevale & Rose, 2011; Goldin & Katz, 2007; Oreopoulos & Petronijevic, 2013). This supply-demand gap will not only have negative consequences for the economy, it will further exacerbate the growing disparities in earnings between those with higher and lower levels of educational attainment.

To meet labor market demands and support the economic security of individuals, researchers estimate the US will need an additional 20 million workers by 2025 with some postsecondary education (including those with some college but no degree and associate's degrees) (Carnevale & Rose, 2011). Researchers' estimates for California's higher education targets vary based on how postsecondary educational attainment is defined, how the target is calculated, and the target year used. Two prominent research groups estimate that California will need between 2.4 million residents with a postsecondary credential (comprised of certificates, associate's degrees, and bachelor's degrees) by 2025 (California Competes, 2015) or 1.1 million additional workers with bachelor's degrees only by 2030 (Public Policy Institute of California, 2017). Regardless of how these figures are

calculated, if current trends continue, California will fall short of the postsecondary education goals.

Figure1: The Degree Gap: Projected, Needed & Cumulative



Source: https://static1.squarespace.com/static/55f70367e4b0974cf2b82009/t/56671002bfe8735e45e0e813/1449594882127/Mind+the+Gap.pdf

In order to address both individuals' and society's needs for higher levels of educational attainment, particularly postsecondary awards for traditionally underserved students, we must look to how institutions, states, and the federal government can improve how they provide information on financial aid to prospective, current, and former college students. Each entity has a critical role in financial aid processes, and additionally provide their own financial support for students. In this essay, I discuss specific ways institutions, states, and the federal government can improve financial aid messaging to better support college access for the state's most underserved students.

What Might Be Causing These Low Levels of Financial Aid Up-Take?

Ineffective marketing of financial aid information generally and poor outreach to traditionally underserved students specifically, combined with a confusing financial aid process can mean some prospective students never apply for or receive aid even when they are eligible and interested. Financial aid is often the starting point for an entire college-going process that is complex and confusing for students to successfully navigate, particularly students whose family members or peers did not attend college, leaving them without the direct, personalized guidance that comes from having close community with accurate college knowledge. These students instead depend disproportionately or entirely on information from their school, colleges, and government financial aid offices (Jez, 2016; Jez & Venezia, 2009; McDonough, 1997; Venezia, Kirst, & Antonio, 2000). However, the compliance focus of bureaucracies combined with the lack of understanding of students' needs lead to information, outreach, and processes that act as barriers rather than supports

(Cochrane, 2007; Jez, 2016; *Reauthorizing the Higher Education Act,* 2018).

Students need to learn about financial aid – what it is, who is eligible, and the process for receiving it. Information provided to students and their families is opaque and confusing, leaving them discouraged and less likely to apply for aid at all (Dynarksi & Scott-Clayton, 2006; Greenfield, 2015; Hoxby & Turner, 2015; Perna & Steele, 2011). Students and their families are confused and discouraged. Students mis-estimate the cost of college – 69% estimated their state college was 200-500% more than the actual cost (Kirst & Venezia, 2004). They did not realize that different colleges had different costs – about half of students studied thought all colleges cost the same (Perna & Steele, 2011). Moreover, students did not understand that financial aid was available or did not know how to access it. When they did receive information on financial aid, they had difficulty understanding financial aid terms (Greenfield, 2015). At times, students thought they understood basic financial aid information but, in fact, did not. For example, students thought they understood what a student loan default was, but then would go on to explain that it was good for an institution to have high student loan default rates (Jez, 2016). The multiple types of California financial aid programs confused California students. They did not understand that students attending a California community college would receive a smaller Cal Grant award than students attending the University of California. Students were also confused about eligibility requirements for the Cal Grant A (Tierney & Venegas, 2009). The complexity of the financial aid application serves as a barrier, particularly for students from low-income families. Only half of applicants who should have faced the simplified FAFSA did so; and 90% of low income applicants ended up answering questions they did not have to (Dynarski & Scott-Clayton, 2006).

Students continue to be confused even after receiving aid. The financial aid verification process proves to be challenging for students. They do not understand why they have to verify their information, thinking that the verification request meant they had done something wrong and were in trouble (*Reauthorizing the Higher Education Act,* 2018). After leaving college, financial aid continues to cause confusion – now in their understanding of their student loans. Students understanding of how much they owe is poor (Andruska, Hogarth, Fletcher, Forbes, & Wohlgemuth, 2014).

To help address the confusion that students and their families face through the financial aid process, I highlight opportunities to clarify financial aid messaging to students and their families. To be clear, the messaging and processes of financial aid are not the only barriers to students accessing financial aid. The structure and availability of financial aid, particularly insufficient need-based financial aid to cover students' total college costs, are also critical issues that exist and must be addressed beyond the issues discussed in this paper.

For Those for Whom Information and the Financial Aid Application Process are Barriers, How Can We Address These Issues?

Research on student use of information and understanding of the college-going process provide guidance on reforms that can improve students' use of financial aid. Some of these reforms can be made immediately, while others will require deeper reforms to processes that will require the inclusion of students, their families, schools, and other critical stakeholders.

Immediate Reforms

Detailed below are changes to existing materials, such as websites, forms, flyers, and emails that would immediately improve the clarity of financial aid information. These changes are simply good, evidence-based practice:

- Standardize terms used in financial aid documents.
- Information in financial aid documents should be clear, complete, and accurate.
- Focus on providing information for the plurality and for the highest need students.
- Provide information where students are looking for it.

Standardize terms. Financial aid documents use different words for the same term, which makes an already difficult-to-understand document even more confusing. In a review of 515 financial aid award letters, a study found direct unsubsidized loans represented in 136 unique ways across the 455 institutions that offered these loans, including 24 that excluded the word "loan" completely (for example, "Fed Direct Unsub" or "Unsubsidized DL" among many other permutations) (Burd, Fishman, Keane, Habbert, Barrett, Dancy, Nguyen, & Williams, 2018). As financial aid information uses terminology unfamiliar to most students and families, it is imperative that terms are used correctly and consistently. Inconsistent and incorrect use of terms make an already foreign document even more difficult to understand.

There has been movement to legislate changes to financial aid award letters that would include a standardization of terms. For example, at the federal level, in 2017, U.S. Senators Grassley and Franken proposed the Understanding the True Cost of College Act (S. 888, 2017) which would use consumer testing to develop a required uniform financial aid award letter with standardized terms. Senators Grassley and Franken also introduced the Net Price Calculator Improvement Act (S. 889, 2017), which includes a provision for the U.S. Department of Education to develop a universal net price calculator, which would help standardize the calculation of this important metric. Already in use is the federal Financial Aid Shopping Sheet, which focuses on providing students consistent, clear, and complete information on their financial aid options. I discuss this further in the next section.

Provide clear and complete information. Financial aid documents frequently provide incomplete information, such as financial aid award letters excluding the cost of an institution, grouping all types of aid together, or not providing information on how to accept or decline aid (Burd et al., 2018). Students get lost in the process—a survey of likely Pell-eligible community college students found that 62% were unsure of their application status or incorrectly believed their financial aid applications were complete (Cochrane, LaManque, & Szabo-Kubitz, 2010). The lack of clarity leaves students and their families unable to make informed decisions.

Students want simple information. An experiment revising the financial aid notifications to improve their clarity is finding that a simpler format and behavioral nudges improved student engagement early in the financial aid process. More specifically, students who received a revised notification letter were more likely to visit the financial aid sign-up page and create a financial aid account – the first steps to receiving aid (Linos, Reddy, and Rothstein, 2018).

Students also want to simply understand how much college will cost them. In fact, when students were asked what information they would find useful, they rated cost information as the most useful piece of information

(Jez, 2016). To ensure students understand the difference between an institution's full cost, or sticker price, and the price they will pay after taking financial aid into account, or net price, financial aid offer letters must highlight the institution's net cost (and institutions must use the same formula for calculating net price).

The aforementioned Grassley-Franken acts would help to address this issue. However, the federal government, and soon California, have already implemented use of the federal Financial Aid Shopping Sheet (U.S. Department of Education, n.d.), which provides financial aid recipients clear, complete, consistent, and comparable financial aid offers for each institution to which they were admitted. The use of such a document would address this and the previous recommendation. In 2020, all California institutions that participate in federal student aid programs will be required to provide students this information (A.B. 1858). This document provides a template that each institution uses as a cover letter to financial aid offers. Using clear and consistent language, it communicates the financial aid offer to the student, allowing students to understand the sources of financial aid and the cost they will face. Moreover, each institution using the same template allows the student to easily compare financial aid offers and net cost.

These changes to making documents clearer may have large impacts on students utilizing the financial aid for which they're eligible. These updated documents have already been created. As such, the next step is supporting requiring their widespread use.

Focus on what is needed by most (and the most financially needy), rather than covering all possibilities (allowing those with different circumstances to reach personalized assistance). When financial aid information aims to cover all possible permutations, it can overwhelm students and families. With technology, we have the ability to ask students a few targeted questions and then provide individualized information for their specific circumstance. For example, students who complete the FAFSA online may benefit from FAFSA simplification that uses skip logic to only require students to answer the questions necessary to determine their financial aid package. The FAFSA computer software uses students' responses to determine the next questions that must be answered to complete the application. The questions that they do not need to answer are skipped. Another example is in the use of net price calculators. Net price calculators could use a single set of questions to determine the net price for all the institutions for which a student applied.

Provide information and assistance where students and other key stakeholders search for information. While many students and their families may look online for information, there is not a clear place for them to go. Each public higher education sector and each individual institution has its own website on paying for college, as do the California Student Aid Commission (CSAC) and California's Bureau for Private Postsecondary Education (BPPE) (and some of these organizations have multiple websites). Both CSAC and BPPE maintain social media accounts, but their accounts comingle messages for students with other agency announcements. In a study of students attending for-profit colleges, who tend to depend heavily on financial aid and come from minority and lower income backgrounds, students report searching for information on going to college directly from the colleges themselves (e.g., college websites and college staff) (Jez, 2016). It makes sense that students may not consider the financial aid process as siloed from the rest of the college-going process, so policymakers should consider better integrating financial aid information with other college search information.

Deeper, Longer Term Reforms

Below I recommend four broad reforms, from least to most intensive, that would more significantly and permanently improve the financial aid process for underserved students:

- Consider the full span of financial aid for students and their families – from pre-college outreach through loan repayment.
- Consider the diverse needs of diverse student populations.
- Include targeted students and their families in the development of financial aid policies and administrative processes.
- Shift financial aid mindsets and processes from a compliance focus to a student-centered focus.

Consider the full span of financial aid processes from pre-college outreach to student loan repayment. Discussions around reforming student financial aid tend to focus on the initial application and award but students must learn about financial aid options significantly before the time of application, they must renew their aid each year they are enrolled in college, and continue to participate in aid after they leave college through the loan repayment process. As such, policymakers must consider how to reach students effectively from before they start college through graduation and completion of student loan repayment.

Students should learn about financial aid early in their academic careers, as students may begin their college choice process as early as seventh grade (Cabrera & La Nasa, 2002). Likely not unrelated, some early intervention programs begin in the sixth grade, integrating college knowledge into their curricula (Perna & Swail, 2001). Increasing parents' knowledge of financial aid is also of critical importance. In the financial aid process for most students, the involvement of parents is critical as students must report parent income details and, at times, parents are offered loans to support students' college costs. Students whose parents have accurate financial aid knowledge are more likely to enroll in college (Ekstrom, 1981; Higgins, 1984; Flint, 1993). As such, outreach efforts should start early and include key stakeholders, such as students' families. Guiding questions to consider include, when should students or their families begin thinking about and planning for college costs? Who should be involved – students, parents, teachers, counselors, others? Who should be sharing this information with these key constituents?

Not only is early signaling of financial aid availability important to ensure access, focusing on financial aid processes after students matriculate into higher education is also critical. Students continually make decisions about receiving financial aid through their postsecondary careers and, even after their initial financial award, must continually demonstrate financial need and verify eligibility. After leaving college, many students have student loans they must repay, requiring engaging in the student financial aid process long after they are no longer a student. Much research has been done on the challenges these processes pose; however, even without fixing the process, improvements to student communications could improve outcomes. For example, as discussed above, notifications to students regarding verification and eligibility checks could make clear the purpose of these checks and how students were selected – specifically aiming to ensure students do not feel being selected for these checks is because they did anything wrong, minimize student anxiety, and, therefore, increase the numbers of students who complete these checks and receive the financial aid for which they qualify. Improving the messaging of financial aid limits and loan repayment options could help students navigate the complicated financial aid processes that continue during and after their postsecondary careers. Receiving clear messaging about complex processes is better than receiving convoluted messaging about complex processes.

Consider the diverse needs of diverse student populations. Different students need different information and need it provided in different ways. Undocumented students need information on financial aid programs for which they may be eligible – for example, they may qualify for California's state aid programs but not for federal student aid. Foster youth will have different needs than students who are not placed with foster families through the child welfare system. Foster youth are considered independent and will complete the financial aid application without providing parental information. Students who are the first in their family and students who attend schools where few go on to college will need different supports than legacy students in college prep schools, who need to make few choices about attending college since that is assumed for them.

Policymakers and financial aid administrators should identify the types of students they target and the types of students they seek to target. Then they should seek to understand the specific needs of those populations. What does the financial aid process look like for those students? What information do they need to know to successfully navigate it? How can that information be provided so that it is clear and actionable? How will you know if you have been successful in targeting those students?

Include targeted students and their families in the development of financial aid policies and administrative processes. Changes in how financial aid forms are developed, information is distributed, and processes are created must be made. Financial aid processes have developed with the input of policymakers, experts, student advocates, and college access professionals, however these groups tend not to include adequate representation from those in the target populations who are less likely to apply for and take financial aid. As such, these materials and processes have largely been developed and executed without the deep involvement of the targeted populations. Because of their exclusion, the development of financial aid forms, information, websites, and processes that aim to support students have become a barrier. For example, asking students to verify their identity by coming to the financial aid office during its Monday through Friday 8a-5p hours when there are students taking night classes and working their own jobs during that time is burdensome. Developing layer upon layer of outreach programs leads to confusion for students, not more support.

To know what is helping and what is hurting requires engaging with students and their families as valuable sources to be heard and listened to. Also critical to include in these reform processes are the high schools and colleges the targeted students attend, along with key workforce and economic development partners, such as Workforce Investment Boards. Thoughtfully including these voices could start as simply doing some consumer testing of forms to creating a structure that authentically includes their voices through the revisioning of how financial aid is messaged. Consumer testing has found to have benefits, including improved product performance and increased consumer orientation (Dickinson, Raynor, & Duman, 2001; Hsieh & Chen, 2005). However, the ideal state would require deeper involvement of these groups; they should be a critical part of decision-making organizations rather than invitees of the decision makers, so that focus groups of target populations would be redundant and unnecessary.

Who should participate in these decision-making processes should be continually assessed to ensure California's higher education goals can be met. Just as yesterday's World War II veterans' experiences in financial aid do not apply well to today's students, today's students' experiences will differ from tomorrow's students' needs. As such, considerations of inclusion should be an on-going and dynamic process.

Consider financial aid as a support for student success rather than as a compliance function. Administration of financial aid often leads with ensuring compliance rather than promoting college access and success for students with financial need. This mindset promotes red tape, confusion, and dehumanizes the student experience. Colleges with a student-centered culture understand that communications with students should consider students' different needs. For example, these colleges were found to translate documents into the languages spoken by students rather than just having materials in English due to having a large non-English speaking population, to recognize cultural differences among students that impact their knowledge of financial aid, to have experienced staff engage directly with students, and to keep evening office hours for students who attend only evening classes (Cochrane, 2007).

The compliance-driven financial aid verification process is often cited as a pain point for students. During a testimony before the US Senate Committee on Health, Education, Labor and Pensions, President Lowery-Hart of Amarillo College in Texas relayed the impact of financial aid bureaucracy on his students. He found that the verification process led students to worry that they had done something wrong and was seen as punitive, creating panic and angst. President Lowery-Hart explained that to his students verification did not improve their access to higher education, instead it led them to believe that higher education was not for them. He further notes that instead of financial aid staff spending time on helping students understand their financial aid options and how to access them, they instead spend their time on the verification bureaucracy (*Reauthorizing the Higher Education Act*, 2018). This viewpoint is echoed by financial aid and college access professionals (Ahlman, Cochrane, & Thompson, 2016).

Moreover, these bureaucratic processes create confusion on the part of students and colleges. Community colleges went beyond the federal requirements for verification by verifying additional students or requesting more information than necessary (Cochrane et al., 2010). This may be due to confusion on their institutional requirements and a need for better guidance from the U.S. Department of Education.

These compliance functions, including verification and enrollment, GPA, and identity checks, aim to ensure that only eligible students receive financial aid, but in reality they provide minimal to no improvement in identifying ineligible students over the initial application materials. One study found two percent of applicants going through verification were deemed ineligible (Cochrane et al., 2010). However, because of the obstacles that this compliance mindset creates, otherwise financially eligible students will not complete the financial aid process, leaving them without the financial resources to attend college.

Rather than encouraging financial aid officers to focus on compliance, the culture of financial aid should shift to addressing students' need, promoting college access and success, and removing red tape. Financial aid administrators, at the federal, state, and college level, should consider the impact of their actions on students' ability to achieve their educational goals. In the example of verification, understanding the barrier it is for students and its limited effectiveness in identifying ineligible students, federal policy should be changed to eliminate the costly and ineffective verification process and, until then, colleges should verify only the minimal number of applications required. Moreover, understanding the perception of verification as being punitive and anxiety causing, institutions should revisit how they notify students selected for verification to minimize this harm. This student-centered mindset should lead how financial aid administrators approach all of their work. After all, the mission of financial aid is to promote college access and success.

Conclusion

As students and their families make very expensive decisions about whether, where, and how to attend college and how to pay for it, it is imperative that we provide clear, consistent, and accurate messages that support students in reaching their educational aspirations. Simple changes can be made tomorrow that will improve financial messaging, such as reformatting award letters and identifying the single way financial aid terms will be used across all financial aid documents. Other reforms will take longer and require deeper change and commitment. These changes comprise involving targeted students and their families in revising financial aid information, considering the messaging of financial aid from outreach through graduation and beyond, and shifting the bureaucratic culture of financial aid officers to be more focused on student success.

These changes will not happen on their own. They will require intentional and committed leadership to transform financial aid messaging. However, as the culture of higher education generally shifts to appreciating student experiences and prioritizing student success, these changes to financial aid will face less resistance today than yesterday. These changes can be encouraged by the messaging and focus of education leaders, including campus presidents, policymakers, and financial aid administrators. Education leaders can demonstrate their commitment to students if they want their staff to change their current practice and lead from the middle with a student centered mindset. They must encourage experimentation and reward working directly with students, even taking responsibility for student success. Engaging this resistance may be a formidable task, but not because bureaucracies want failure but because inertia means the status quo is our natural state.

REFERENCES

A.B. 1858. Assembly Regular Session 2017-2018. (CA 2017)

Ahlman, L., Cochrane, D. F., & Thompson, J. (2016). On the sidelines of simplification: Stories of navigating the FAFSA verification process. Oakland, CA: The Institute for College Access & Success. Retrieved from https://ticas.org/sites/default/files/pub_files/on_the_sidelines_of_simplification.pdf

Andruska, E. A., Hogarth, J. M., Fletcher, C. N., Forbes, G. R., & Wohlgemuth, D. R. (2014). Do you know what you owe? Students' understanding of their student loans. *Journal of Student Financial Aid, 44*(2).

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

Bird, K. & Castleman, B. L. (2016). Here today, gone tomorrow? Investigating rates and patterns of financial aid renewal among college freshmen. *Research in Higher Education, 57*(4), 395-422.

Brand, J. E. & Xie, Y. (2010). Who benefits most from college? Evidence for negative selection in heterogeneous economic returns to higher education. *American Sociological Review, 75*(2), 273-302.

Burd, S., Fishman, R., Keane, L., Habbert, J., Barrett, B., Dancy, K., Nguyen, S., & Williams, B. (2018, June 5). Decoding the cost of college: The case for transparent financial aid award letters. *New America*. Retrieved from https://www.newamerica.org/education-policy/policy-papers/decoding-cost-college/

Bureau of Labor Statistics, U.S. Department of Labor. (2018). Unemployment rates and earnings by educational attainment, 2017. Retrieved from https://www.bls.gov/emp/chart-unemployment-earnings-education.htm

Cabrera, A. F., & La Nasa, S. M. (2002). Understanding the college-choice process. *New Directions for Institutional Research, 2000*(107), 5-22.

California Competes. (2015). Mind the gap: Delivering on California's promise for higher education. Retrieved from http://californiacompetes.org/degree-gap/

Card, D. (1995). Using geographic variation in college proximity to estimate the return to schooling. In L.N. Christofides, E. K. Grant, & R. Swidinsky (Eds.), *Aspects of Labor Market Behaviour: Essays in Honour of John Vanderkamp* (201-222). Toronto, Canada: University of Toronto Press.

Carnevale, A. P., & Rose, S. J. (2011). The undereducated American. *Georgetown University, Center on Education and the Workforce*. Retrieved from https://1gyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/2014/11/undereducatedamerican.pdf

Carnevale, A. P., Rose, S. J., & Cheah, B. (2011). The college payoff: Education, occupations, lifetime earnings. *Georgetown University, Center on Education and the Workforce*. Retrieved from https://cew.georgetown.edu/cew-reports/the-college-payoff/

Carrell, S., & Sacerdote, B. (2017). Why do college-going interventions work? *American Economic Journal: Applied Economics, 9*(3), 124-51.

Castleman, B. L., & Page, L. C. (2016). Freshman year financial aid nudges: An experiment to increase FAFSA renewal and college persistence. *Journal of Human Resources, 51*(2), 389-415.

Cellini, S. R., & Chaudhary, L. (2014). *The labor-market returns to a private two-year college education. Economics of Education Review, 43, 125-140.*

Cochrane, D. F. (2007). Green lights & red tape: Improving access to financial aid at California's community colleges. *The Institute for College Access and Success.* Retrieved from https://ticas.org/content/pub/green-lights-red-tape

Cochrane, D. F., LaManque, A., & Szabo-Kubitz, L. (2010). After the FAFSA: How red tape can prevent eligible students from receiving financial aid. *The Institute for College Access and Success.* Retrieved from https://ticas.org/sites/default/files/legacy/files/pub/AfterFAFSA.pdf

Dickinson, D., Raynor, D. K., & Duman, M. (2001). Patient information leaflets for medicines: Using consumer testing to determine the most effective design. *Patient Education and Counseling, 43*(2), 147-159.

Dowd, A. C., & Coury, T. (2006). The effect of loans on the persistence and attainment of community college students. *Research in Higher Education, 47*(1), 33-62.

Dynarski, S. M. & Scott–Clayton, J. E. (2006). The cost of complexity in federal student aid: Lessons from optimal tax theory and behavioral economics. *National Tax Journal, 59*(2), 319-356.

Dynarski, S. & Scott-Clayton, J. (2013). Financial aid policy: Lessons from research. *Future Child, 23*(1), 67-91.

Ekstrom, R. B., Beier, J. J., Davis, E. L., & Gruenberg, C. B. (1981). Career and educational counseling implications of women's life experience learning. *The Personal and Guidance Journal, 60*(2), 97-101.

Flint, T. A. (1993). Early awareness of college financial aid: Does it expand choice? *The Review of Higher Education, 16*(3), 309-327.

Gladieux, L. F. (2004). Low income students and the affordability of higher education. In R. D. Kahlenberg (ed.), *America's untapped resource: Low income students in higher education*. New York, NY: The Century Foundation Press.

Goldin, C., & Katz, L. F. (2007). *The race between education and technology: The evolution of U.S. educational wage differentials, 1890 to 2005* (NBER Working Paper No. 12984). Retrieved from http://www.nber.org/papers/w12984

Goldrick-Rab, S. (2006). Following their every move: An investigation of social-class differences in college pathways. *Sociology of Education, 79*(1), 67-79.

Greenfield, J. S. (2015). Challenges and opportunities in the pursuit of college finance literacy. *The High School Journal, 98*(4), 316-336.

Grodsky, E., & Jones, M. T. (2007). Real and imagined barriers to college entry: Perceptions of cost. *Social Science Research, 36*(2), 745-766.

Higgins, A. S. (1984). Who knows and who goes: Student knowledge of federal financial aid programs and college attendance. *Journal of Student Financial Aid, 14*(3), 19-26.

Hout, M. (2011). Social and economic returns to college in the United States. *Annual Review of Sociology, 38,* 379-400.

Hoxby, C. M., & Turner, S. (2015). What high-achieving low-income students know about college. *American Economic Review, 105*(5), 514-17.

Hsieh, L.-F., & Chen, S. K. (2005). Incorporating voice of the consumer: Does it really work? *Industrial Management & Data Systems, 105*(6), 769-785.

Jepsen, C., Troske, K., & Coomes, P. (2009). The labor-market returns to community college degrees, diplomas, and certificates. *University of Kentucky.* Retrieved from https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1061&context=ukcpr_papers

Jez, S. J. (2016). Increasing the effectiveness of state reporting requirements and student disclosures for private postsecondary institutions. *California State University Sacramento.* Retrieved from https://www.bppe.ca.gov/forms_pubs/reporting_requirements.pdf

Jez, S. J., & Venezia, A. (2009). Looking ahead: Synthesizing what we know about national, regional, and local efforts to improve student preparation and success. In A. Venezia & A. Bueschel (Eds.) *New Directions for Community Colleges (145).* Hoboken, NJ: Wiley.

Kane, T. J., & Rouse, C. E. (1993). *Labor-market returns to two- and four-year colleges: Is a credit a credit and do degrees matter?* (NBER Working Paper No. 4268). Retrieved from http://www.nber.org/papers/w4268

Kane, T. J., & Rouse, C. E. (1995). Labor-market returns to two- and four-year college. *The American Economic Review, 85*(3), 600-614.

Kantrowitz, M. (2009). Student aid policy analysis: Reasons why students do not file the FAFSA. Retrieved from http://www.finaid.org/educators/20110118nofafsareasons.pdf

King, J. E. (2004). *Missed opportunities: Students who do not apply for financial aid.* Washington, DC: American Council on Education. Retrieved from https://www.acenet.edu/news-room/Documents/IssueBrief-2004-Missed-Opportunities-Students-Who-Do-Not-Apply-for-Financial-Aid.pdf

Kirst, M. W. & Venezia, A. (Eds.). (2004). *From high school to college: Improving opportunities for success in postsecondary education.* San Francisco, CA: Wiley.

Lemieux, T., & Card, D. (2001). Education, earnings, and the 'Canadian G.I. Bill'. *Canadian Journal of Economics, 34*(2), 313-344.

Linos, E. , Reddy, V., & Rothstein, J. (2018). *Cal Grant eligibility letter study* (Unpublished preliminary analyses). California Policy Lab, UC Berkeley.

Mendoza, P., Mendez, J. P., & Malcolm, Z. (2009). Financial aid and persistence in community colleges: Assessing the effectiveness of federal and state financial aid programs in Oklahoma. *Community College Review, 37*(2), 112-135.

McDonough, P. M. (1997). Choosing colleges: How social class and schools structure opportunity. New York, NY: SUNY Press.

Net Price Calculator Improvement Act, S. 889, 115th Cong. (2017).

Oreopoulos, P., & Petronijevic, U. (2013). *Making college worth it: A review of research on the returns to higher education* (NBER Working Paper No. 19053). Retrieved from http://www.nber.org/papers/w19053

Oreopoulos, P., & Salvanes, K. G. (2011). Priceless: The non-pecuniary benefits of schooling. *Journal of Economic Perspectives, 25*(1), 159-184.

Perna, L. W. & Steele, P. E. (2011). The Role of Context in Understanding the Contributions of Financial Aid to College Opportunity. *Teachers College Record, 113*(5), 895-933.

Perna, L. W., & Swail, S. W. (2001). Pre-college outreach and early intervention. *Thought & Action, 17*(1).

Public Policy Institute of California. (2017). Addressing California's skills gap. Retrieved from http://www.ppic.org/wp-content/uploads/r_0917hj2r.pdf

Reauthorizing the Higher Education Act: Financial Aid Simplification and Transparency, U.S. Senate Committee on Health, Education, Labor, & Pensions (2018) (Testimony of Dr. Russell Lowery-Hart).

Tierney, W. G. & Venegas, K. M. (2009). Finding money on the table: Information, financial aid, and access to college. *Journal of Higher Education, 80*(4), 363-388.

Understanding the True Cost of College Act of 2017, S. 888, 115th Cong. (2017).

U.S. Department of Education. (n.d.). Financial aid shopping sheet. Retrieved from https://www2.ed.gov/policy/highered/guid/aid-offer/index.html

Venezia, A., Kirst, M. W., & Antonio, A. L. (2000). Betraying the college dream: How disconnected K-12 and postsecondary education systems undermine student aspirations. *Stanford University.* Retrieved from https://web.stanford.edu/group/bridgeproject/betrayingthecollegedream.pdf

Zarate, M. E., & Pachon, H. P. (2006). Perceptions of college financial aid among California Latino youth. *Tomas Rivera Policy Institute.* Retrieved from https://eric.ed.gov/?id=ED502067

INCREASING THE TAKE-UP OF CAL GRANTS

By Elizabeth Linos, Vikash Reddy, and Jesse Rothstein

Introduction

Following decades of rising inequality and stagnating employment and earnings for non-college workers, attending college is more important than ever before to a young adult's economic prospects. A young person who earns a two-year associate degree will earn over $200,000 more over the course of his or her lifetime than someone with just a high school diploma, and the returns for bachelor's degrees are even higher (de Alva & Schneider, 2013; Ma, Pender, & Welch, 2016; Oreopolis & Petronijevic, 2013). Even students who are less academically strong see big pay-offs from going to college, returns that have grown substantially over the last few decades (Oreopolous & Petronijevic, 2013; Scott-Clayton, 2015; Card, 1999, 2001) as incomes for those without college degrees have stagnated (Holzer, 2018). Growing evidence also suggests that among those who go to college, students benefit from attending four-year rather than two-year and more selective rather than less selective colleges (Cohodes & Goodman, 2014; Goodman, Hurwitz, & Smith, 2017).

In spite of this evidence, fewer than two-thirds of California's high school seniors immediately enroll in college upon completing high school (National Center for Higher Education Management Systems, 2018). This share is much lower for students from low-income families, for those whose parents did not go to college, and for those from underrepresented minority groups (Wilber & Rosigno, 2016). A portion of these gaps reflects differences in preparedness at the end of high school, but there are large gaps even among students who are similarly prepared. In one often-cited statistic, the shares of high-achieving, low-income students who go to college and who earn bachelor's degrees are *lower* than the shares of lower-achieving students from higher-income families (Fox, Connolly, and Snyder 2005, p. 50).

Policymakers have made large investments in recent decades in increasing access to college for low-income students and in offsetting the increasing cost of tuition. The federal Pell Grant program provides more than $26 billion in grants to over 7 million students each year (TICAS, 2018; College Board, 2017). On top of this, many states have created state-level college aid programs, often targeted at high-achieving, low-income students, that provide an additional $10 billion in aid each year, and public and private institutions have increased institutional aid by over 30 percent since 2011 (College Board, 2017). The net effect of this is that grant aid to students totals roughly $125 billion per year, a quadrupling in real terms over the last decade (College Board, 2017; Seltzer 2017). Many low- and middle-income students face zero net costs for tuition and fees at public institutions, and often at private colleges as well.

For many students who could not have attended college in the past, the various sources of aid combine to make college a financially feasible option, though for others additional aid and support would be needed. But there are strong suggestions that existing aid programs fail to reach all students who would benefit from them. One analysis found that more than 20 percent of California community college students who were eligible for a Pell Grant did not receive it, leaving almost $130 million in financial aid on the table in a single semester (Martorell & Friedmann, 2018). This may reflect a lack of familiarity with or misunderstanding of aid

rules and availability, institutional obstacles to the issuance of aid, or psychological barriers that students face when making high-stakes college decisions. There are also likely many students who chose not to attend college but would have, had they known what aid was available. This suggests that there may be room to improve college access and success within the scope of existing aid programs, simply by helping students to navigate a very difficult system.

There is direct evidence that this approach can be effective. For example, an experiment that helped families fill out the Free Application for Federal Student Aid (FAFSA) yielded large effects on college-going (Bettinger et al., 2009). Similarly, one of the Obama Administration's signature higher education initiatives involved providing prospective students with access to calculators that attempt to estimate the aid that will be available to them, under a theory that this would support more informed decisions. In other settings, there is substantial evidence that simple changes to phrasing and framing of communications can increase take-up of government benefits. Bhargava and Manoli (2015), for example, find that simpler notices and application processes and repeated reminders increase take-up of tax benefits. Similar improvements may be possible with college aid as well.

This paper reports on a simple innovation implemented in collaboration with the California Student Aid Commission (CSAC), which administers the Cal Grant college scholarship program, in 2017-18. For a randomly chosen subset of low-income high school seniors who were entitled to Cal Grants, CSAC replaced its regular preliminary notification letter with alternative letters that were designed to be simpler, more inviting, and easier to assimilate. The alternate letters were less visually cluttered, with fewer colors, graphics, and logos; were substantially shorter; used simpler language; and attempted to emphasize the student's deservingness of the award using insights from behavioral science. We describe these letters in greater detail below, and we include examples as an appendix.

Students receiving the preliminary notification letters had already filled out the FAFSA, indicating above-average familiarity with the financial aid process and the ability to navigate complex systems. Nevertheless, they may have failed to appreciate the aid that was available to them, how to claim it, and how it affected the affordability of different college options. If so, the improved letters had the potential to help them make better, more informed choices.

Preliminary evidence indicates that the new letters were highly successful. The first step that students need to take to claim their Cal Grant awards is to register for accounts on a website run by CSAC. Among students who filed FAFSAs and were sent the more traditional preliminary notification letters by May 1, 2018, 62% had registered accounts by June 11. Among those who were randomly selected to receive the alternate letters, the registration rate was as much as 6.8 percentage points higher. Although we will not know for several months whether the higher rate of account registration translates into higher rates of college-going and/or Cal Grant receipt, at a minimum this early evidence indicates that an extremely simple zero-cost intervention can help students navigate the college aid process more smoothly.

California Financial Aid, the Cal Grant, and Notification Letters

The higher education landscape in California is complex. The state hosts two independent four-year public university systems, the University of California and the California State University, as well as a 114-campus community college system that is the largest higher education system in the United States (soon to expand

to include an online-only virtual campus). It also has a host of private colleges, including some that are for-profit and some that are not-for-profit. Tuition and fees vary dramatically among these institutions, as do institutional financial aid programs.

The Cal Grant

The Cal Grant is a suite of many different programs that provide college scholarships in varying amounts to different student sub-populations. Our work with CSAC has focused on notification award letters sent to high school seniors to let them know about their eligibility for two varieties of Cal Grants – Cal Grant A and Cal Grant B. These awards serve students who enroll in college within a year of graduating from high school and, as entitlements, are available to any student who meets the eligibility requirements. We discuss them in more detail below.[1]

The Cal Grant A is for high-achieving, moderate-income students pursuing associate's or bachelor's degrees, while the Cal Grant B is for low-income students, with good but lesser high school achievement. Both programs are enormously complicated, even for policy experts; our discussion of the rules for each glosses over some complexities in support of outlining the broad contours of the programs.

The Cal Grant A is designed to help pay for tuition and fees at public or private colleges. Award amounts vary by the type of institution attended. Table 1 contains the award amounts for full-time students in the 2018-19 academic year; students who enroll half-time receive awards equal to half of the maximum for their institution's category.

Table 1: 2018-2019 Cal Grant A Awards by College Segment

College segment	Cal Grant A award amount for full-time students
California State University (CSU)	$5,742
University of California (UC)	$12,630
Private, non-profit colleges	$9,084
For-profit colleges (WASC accredited)	$8,056
For-profit colleges (not WASC accredited)	$4,000

These award amounts are set to cover in-state tuition and required statewide fees at the CSU and UC. They do not cover campus-level fees. Because tuition is much higher at the UC than at CSU, the face value of the Cal Grant is much larger at UC. Awards for students attending private colleges generally do not cover full tuition, but are nevertheless quite generous relative to comparable programs in other states, or to the CSU awards. Awards are renewable for up to four full-time years (eight years for those enrolled half-time), conditional on satisfactory academic progress and no breaks in enrollment (CSAC, 2016).[2]

Students who enroll in community colleges do not receive the Cal Grant A, even if they are otherwise eligible. If they transfer to a CSU or UC within two years, however, they receive the Cal Grant A for their final two years.

The Cal Grant B program is initially less generous, at least for students attending four-year institutions. It pays only $1,672 annually toward books and living expenses. This "access award" is available at both community colleges and four-year institutions, however. Many Cal Grant B students also receive a fee waiver at community colleges. Moreover, following a successful first year of college, Cal Grant B students receive a tuition and fees component that equals the Cal Grant A amount for the appropriate sector in addition to their access awards. Students who are eligible for both the Cal Grant A and B (i.e., those with both high achievement in high school and very low family incomes) can receive either.

The net effect is that students receiving Cal Grant A and attending public institutions receive aid packages that include grants sufficient to cover at least the full statewide tuition and fees. Moreover, many Cal Grant students are also eligible for federal Pell Grants, which they can apply toward remaining private college tuition or, at public institutions, toward living expenses. There may also be additional state aid, such as the California College Promise Grant. Colleges may supplement federal and state grants with institutional aid, providing additional support for living expenses. Institutional aid budgets are much larger at UC and CSUs than at community colleges. As a consequence, for students receiving Cal Grants the net cost of attending college will often be lower at UC or CSU than at a community college. Students may of course take out loans to cover remaining unmet need.

The Cal Grant Eligibility and Claiming Process

To be eligible for the Cal Grant A and B entitlement awards, students must meet three sets of requirements:

- **General requirements.** To obtain a new Cal Grant award, a student must be an incoming college student within one year of high school graduation. In addition, students must be US citizens or eligible non-citizens[3]; must meet selective service requirements; must not be incarcerated; must not be in default on federal loans; must maintain satisfactory academic progress and CA residency; and must be participating in a program leading to a degree.
- **Family income.** The student's family income must fall below a threshold that varies based on family size. For students graduating from high school in 2019 and first enrolling in college in 2019-20, incomes must be below $102,500 for a family of four to qualify for the Cal Grant A. The cap for the Cal Grant B is much lower, $53,900 (CSAC, 2018).
- **Academic achievement.** For the Cal Grant A, the student must have a high school GPA of 3.0 or higher. For the Cal Grant B, a GPA of 2.0 or higher is needed.

The income and achievement eligibility requirements are assessed by CSAC, based on information provided by schools and students. High schools provide GPAs for all members of their senior classes to CSAC at the beginning of the school year. Students must then submit FAFSAs, as early as October 1st of their senior year.[4] CSAC uses this information to identify potentially eligible students.

Once a student is identified as potentially eligible, CSAC mails the student a preliminary notification of his or her award eligibility. These notifications have gone out beginning in mid-November of the senior year in the past years, and are processed on a rolling basis through the next spring as FAFSA information arrives to CSAC. Importantly, both UC and CSU admissions applications are due by the end of November, so many students will not be able to modify their application decisions in response to the notification letters.

Notification letters include instructions about how students can claim their awards. The claiming process has several steps and involves both the students and their colleges. Students must create an account on WebGrants4Students (CSAC's online portal for students), confirm their GPAs, and report the school they will be attending. Following enrollment, institutions must verify both that the student meets the financial eligibility requirements and that the student is enrolled in a program that meets Cal Grant eligibility guidelines. Once these requirements are met, the colleges disburse the award to the student (which may involve simply applying it toward the student's account).

The Cal Grant and College Accessibility

In principle, the Cal Grant should help make college more accessible to a large population of California's high school seniors. However, in the presence of limited information and a potentially overwhelming process, the Cal Grant may fail to reach some students in its intended population.

First, students must file FAFSAs in order to qualify. CSAC communicates directly with students who have already taken this first step, and so those who do not file a FAFSA may not be aware that they are Cal Grant eligible. There are many financial aid advising programs that aim to help students fill out the FAFSA. Some of these programs, like the California Student Opportunity and Access Project and the *Cash for College* workshops, are sponsored by CSAC. In the future, because of new state legislation (AB-2015, enacted September 19, 2018), every high school will provide students with information on how to fill out the FAFSA at least once before their senior year. Still, for many students, financial eligibility could be imputed with high reliability (for example, based on the school attended and/or the student's free lunch status), and it would be possible to notify such students that they are likely eligible for a Cal Grant if they complete the FAFSA.

Second, even after filing the FAFSA students must navigate a complex process to receive their awards. They must register on WebGrants4Students and, often, respond to federal and college requirements that they provide documentation for the information provided on the FAFSA. After these are done, it should in principle be up to the college to claim the award, though CSAC reports that some colleges fail to claim awards on behalf of all of their eligible students so it may be necessary for the student to advocate for herself at this stage as well.

Finally, students must make informed decisions about whether to attend college and in many cases which college to attend. The Cal Grant A aims to remove tuition and fees as a consideration in the decision about whether to attend college, and because non-tuition costs will generally be similar across sectors the graduated nature of the award should remove relative cost considerations in the choice of college (at least among public institutions). However, if students fail to appreciate this aspect of the Cal Grant, do not understand how the size of the award relates to relative tuition costs at different colleges, or have trouble optimally weighing the costs and benefits of different options in a complex decision, they may make choices different from those that they would make with a more complete understanding.

Several aspects of the Cal Grant process described above may contribute to this mis-optimization. First, many aspects of the college selection process – including some decision points that come several years prior to high school graduation – must be made well in advance of receiving the Cal Grant notification letter. Course selections from the beginning of high school, decisions to study for and take standardized tests like the PSAT, the SAT, and/or the ACT, and extra-curricular activities will all influence the student's college options. The availability of the Cal Grant may not influence these decisions if, as seems likely, students are not fully aware of the availability and rules of the program. Moreover, most students who will apply to UC and CSU campuses will have done so before the Cal Grant notification letter arrives.

Second, the Cal Grant notification letter itself may not fully resolve students' misunderstandings of the process. In the era of electronic communications, it is not clear how many high school seniors even open letters that arrive by postal mail. Once opened, the letter, like many government communications, is not as clear and compelling as it might be, and a student could well fail to appreciate the value of the Cal Grant or have the cognitive bandwidth to navigate the process for obtaining one. Moreover, while the letter provides a version of our Table 1, it provides little context: "maximum award" values are listed but no information is provided about what it takes to qualify for the maximum award, and the letter does not explain that the dollar values listed are set to fully cover tuition and fees at public institutions. Our work on alternative forms of the notification letter is intended to address these shortcomings and test whether this channel is an important contributor to mis-optimizations in the college enrollment process.

Finally, the dual role of the student and the college in claiming the award may leave students confused and allow some to fall through the cracks. Although in principle registering for a WebGrants4Students account and responding to any subsequent queries should be enough for any eligible student to obtain the Cal Grant, in some cases the college may fail to claim the award or may not do so in a timely way. Nothing in the Cal Grant communications explains to students that this may occur, or what to do to ensure that it doesn't. Again, clearer letters may leave students better placed to advocate for themselves.

Improving Student Information Via Improved Notifications: CSAC Experimentation

CSAC began sending preliminary notification letters and asking students to register their school choice with CSAC in 2016. Letters are mailed to students' postal addresses, as reported on their FAFSAs; CSAC follows up with an e-mail in February.

Since the initial letters, CSAC has worked diligently to improve both the letter design and the language used in the letter text. In the summer of 2017, CSAC contacted the California Policy Lab for technical assistance with the design of a new notification letter and with an evaluation of its impact. The California Policy Lab (CPL) is an initiative based at the University of California's Berkeley and Los Angeles campuses that aims to pair academic expertise with state and local public agencies to carry out quantitative research, based in the state's administrative data, that will enable the agencies to better serve the public interest. The present authors are all affiliated with CPL, and we worked with CSAC to design a new notification strategy.

As a result of this work, CSAC used three versions of the notification letter in the 2017-18 academic year (see Appendix). The first version, which we refer to as the "Baseline," was a streamlined version of the letters that had been used in prior years. We worked with CSAC to make the language and presentation clear. Despite

this, the letter remained quite dense and contained several undefined acronyms and terms. It referred, for example, to the value of Cal Grant B awards, without ever explaining what those were or whether the student was eligible for the Cal Grant B. Moreover, figuring out what one needed to do next to obtain a Cal Grant award required very careful reading, as important information was spread throughout the letter, often in small type. The second and third versions (which we refer to as the "Simplified" version and the "Simplified + Belonging" letters) were designed based on insights from behavioral science to maximize the chance that students reading them would understand and act on them. They were dramatically simplified, with far less text than the baseline letter, and with graphical design features that drew attention to the specific action that students needed to take. In particular, the call to action to visit WebGrants4Students was enclosed in a red box in the middle of the letter, along with the account and ID numbers that students would need to create accounts. In the first letter, by contrast, the URL was printed in small type at the very bottom, and the account information was listed separately at the top without explanation of what it was to be used for.

The two simplified letters were identical to one another in all but one regard. The second letter contained two additional sentences, printed in bold, that aimed to convey a sense of shared purpose and belonging: "You have shown that you're the kind of person who belongs in college. We've been working hard to help you get there!"

All three letters are reproduced in the appendix to this paper. As we discuss below, high schools were randomly assigned to one or another form of the letter. This allows us to measure the causal effect of one letter relative to another.

Preliminary results from the pilot study, discussed in greater detail below, were highly encouraging, and CSAC decided to base the 2018-19 letters on the second of the two simplified letters employed in the 2017-18 year. We are again working with CSAC to test several letter variants. One goal will be to disentangle the effects of the various elements of the 2017-18 letters. We also plan to test letter variants that attempt to provide students with additional information about college costs and sources of aid. We discuss the planned interventions below, after we discuss the design and results of the 2017-18 study.

Mechanics of the Experiments

In order to test the effectiveness of the 2017-18 letter variants, we employed a randomized control trial. Randomization ensures that the students receiving the different variants are similar, on average, in all dimensions other than the type of letter they received. This means that any differences in observed outcomes among them can be attributed to the causal effect of the letters rather than to confounding factors, such as ability, motivation, or educational preparedness. Randomization occurred at the school level, meaning that all students within a school received the same letter variant but students at neighboring schools might have received different variants.

The first 2017-18 preliminary notification letters were printed in the second week of November, for students who submitted FAFSAs shortly after they became available in October. By that point, over 30,000 students had been identified as eligible. To overcome internal logistical hurdles involved with printing and mailing so many letters, CSAC printed and mailed them in batches. The first batch of 11,970 Baseline letters was mailed first, between November 20th and November 28th, 2017. The first 12,041 Simplified letters followed

a week later on November 28-November 30, and the first 8,599 Simplified + Belonging letters were mailed on November 30-December 6. New batches were sent approximately weekly thereafter as students filed their FAFSAs and were identified as eligible. As the volume of letters to be mailed declined, gaps were reduced. Baseline letters were typically mailed on Monday with Simplified and Simplified + Belonging letters following later in the week.

A consequence of this mailroom schedule is that the Baseline letters arrived somewhat earlier than the alternative letters, possibly confounding their effects. If letters received on November 22 are more or less likely to be read and acted upon than are letters received on November 30, we have limited ability to distinguish this from an effect of the letter content. For this reason, in our primary analyses we control for the day of the week on which each student's letter was mailed and for a polynomial in the number of days between the letter mailing and May 1st, the last mailing date included in our results presented below. Treatment effects are identified from the fact that the day of the week on which each type of letter was mailed varied across batches, under the assumption that date effects are smooth over time. This assumption would be violated if, for example, letters that arrived before Thanksgiving were discretely more likely to be acted upon than those arriving later. In future analyses, we plan to test the sensitivity of our results to excluding the first batches of letters, among which the mailing gaps were largest.

Roughly 26,000 letters went out in November, followed by 32,000 in December and 17,000 in January. By May 1st, notification letters had been mailed to 131,903 students in 2,298 schools. The average annual household income for these students was a little over $20,000, and one third of the students had a parent who had been to college.

CSAC sent a reminder e-mail in early February to all students who had received letters to date, encouraging them to register for their account if they had not already done so. This email was identical for all students, and in particular did not vary across the three letter groups. CSAC also makes other efforts to reach out to students, including encouraging high school counselors to reach out to students who have not yet registered (which the counselors can check via their own WebGrants accounts).

Initial Results

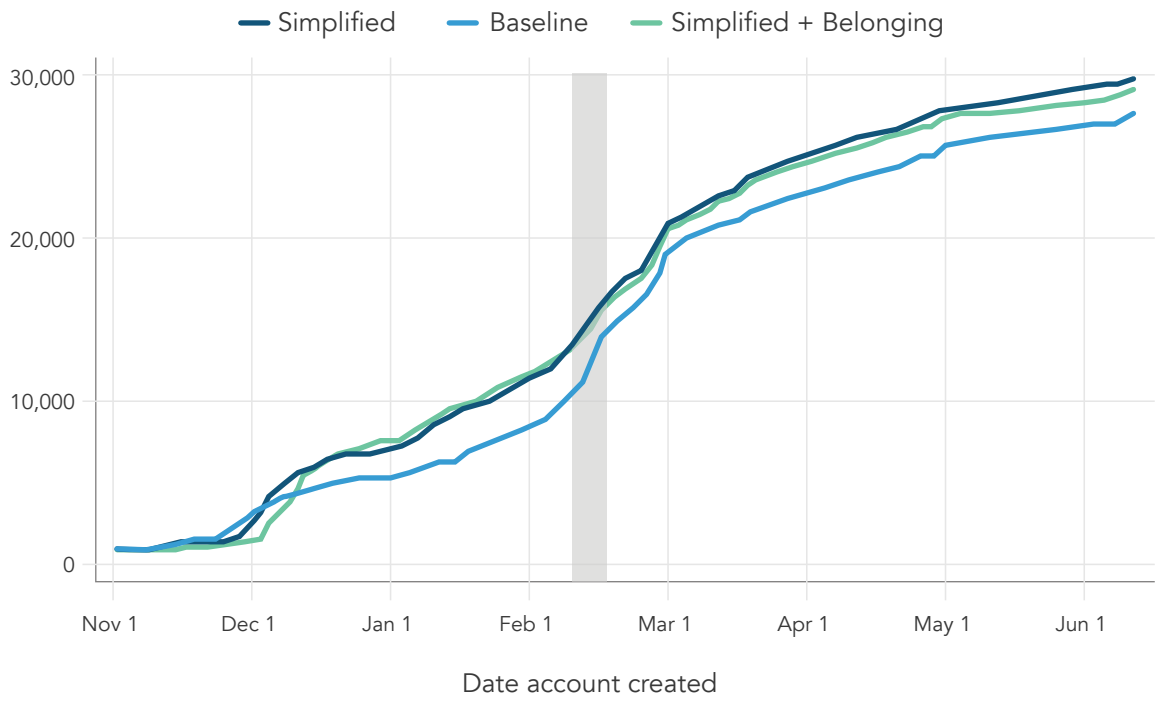
The long-term outcomes of interest in our study are college enrollment, Cal Grant payout, and retention, each of which may be affected if clearer notification letters improve students' understanding of the college aid process and if this leads to different enrollment choices. It is too soon to tell whether the alternative letters led to different college choices, as students receiving letters in 2017-18 only began to enroll in Fall 2018.

Our initial analysis focuses on an earlier outcome, registration for a WebGrants4Students account, as this is a necessary step in the process and is the request made of students in the notification letter. This will tell us whether students were more likely to take action as a result of the improved letters as we would expect if the letters more effectively communicate the necessary information to them. It is possible that impacts on account registration will not translate into impacts on subsequent enrollment or award payments, as students can obtain Cal Grant awards even if they do not register for accounts prior to enrollment. It is similarly possible that improved letters could affect college choices without changing account registration rates, by improving understanding of the program among students who would have registered anyway

(due to counselor encouragement, for example) or among students who will not take the subsequent steps necessary to enroll in college whether or not they register for a WebGrants account. Nevertheless, we view account registration as a valuable early indicator of the success of our new letters, and as a test of whether the letters overcame cognitive barriers imposed by the older, more complex letters.

Figure 1 shows the running total number of accounts created on WebGrants4Students, by letter variant, from the beginning of November 2017 through early June 2018.

Figure1: Cumulative WebGrants4Students Account Registrations by Letter Group



The lines begin near zero (though a handful of tenacious students had already registered for accounts before the first notification letters were mailed). The Baseline series ticks up first, in late November, followed by the Simplified letter and the Simplified + Belonging letter, respectively. This early gap in *when* students registered reflects differences in the timing of the initial letter mailing. But within a few weeks of the initial mailings, when all of the students who received them had had time to respond, we see that the simplified letter variants have generated many more registrations. This is much more consistent with an effect of the contents of the letters themselves rather than of the timing.

All three series increase from mid-December through early February, as initial letter recipients continued to register and as new letters went out. The rate of increase is higher for the simplified letter recipients than for the baseline letter group, again indicating higher responsiveness.

CSAC's follow-up reminder e-mail, sent in early February, is visible in Figure 1 as an increase in account registrations in later February and early March. The increase was larger for the Baseline group, suggesting that the e-mail reached some students who were inclined to register but were not successfully reached by this letter.

Nevertheless, cumulative sign-ups remained much higher for the simplified letter groups throughout the period. By the beginning of June, 26,755 students who received the Baseline letter had created accounts, compared to 29,772 students who received the Simplified letter and 29,338 students who received Simplified + Belonging letter. This represents 62.0% of students who received the baseline letter, 67.6% of students who received the first simplified letter, and 69.0% of students who received the second simplified letter. Each of these is statistically significantly different from the two others; given our large samples, differences this large are quite unlikely to have occurred by chance.

Account registrations in spring 2018 reflect both delayed registrations among students who received letters in the fall and immediate registrations among students who filed their FAFSAs and received their letters later, making it difficult to interpret the estimates in Figure 1 as registration rates. Figure 2 presents the data in a different way, showing the share of students who had registered for accounts as a function of the elapsed time from the mailing of the notification letter. Again, we see that some students registered before the letters were mailed, but this is equally common among all three treatment groups. There are sharp increases in registrations in the days immediately following the mailing of the letters, much larger for the students receiving the simplified letters than for those receiving the baseline letter. 26.5% of students who received the baseline letter had registered for accounts by the 21st day following the letter mailing, compared to 36.2% and 39.4% of the students who received the first and second simplified letters, respectively. The gap persists at roughly this magnitude for the subsequent two months. It closes somewhat thereafter, likely due to the follow-up e-mail and other outreach efforts that captured some students who had not been reached by the initial letters, but remains substantial even 150 days after the letters were sent.

Figure 2: Students Registered for WebGrants4Students Account by Letter Group

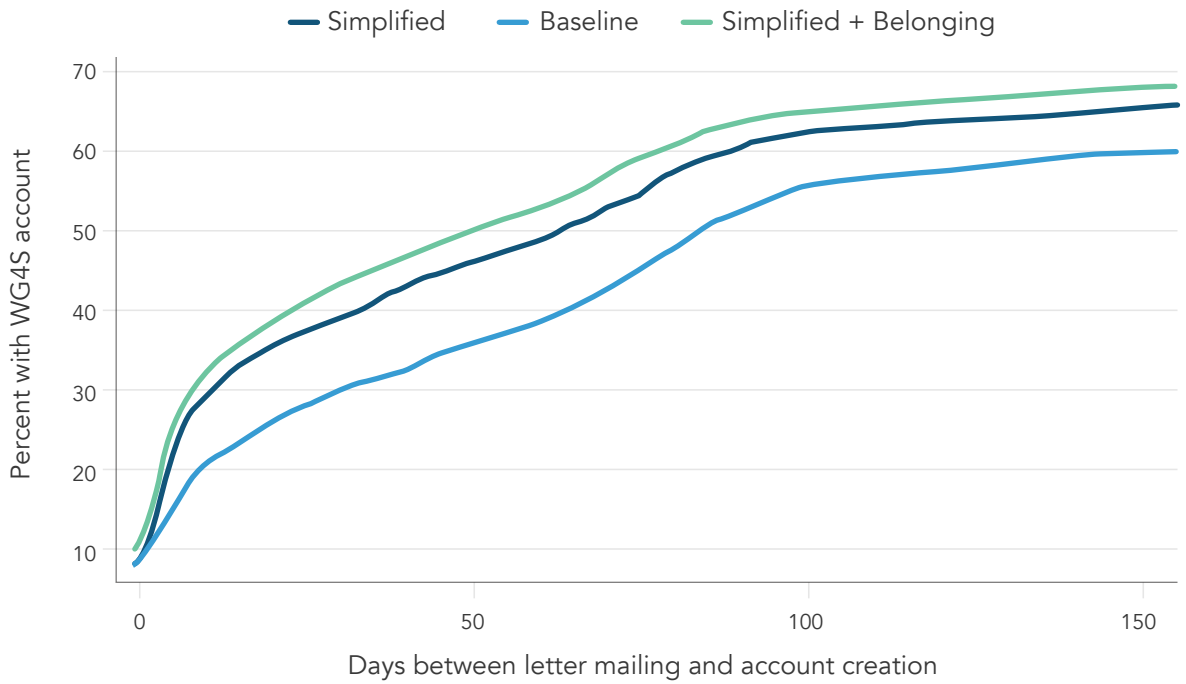


Figure 3: Percentage of Students with WebGrants4Students Accounts as of June 11, 2018

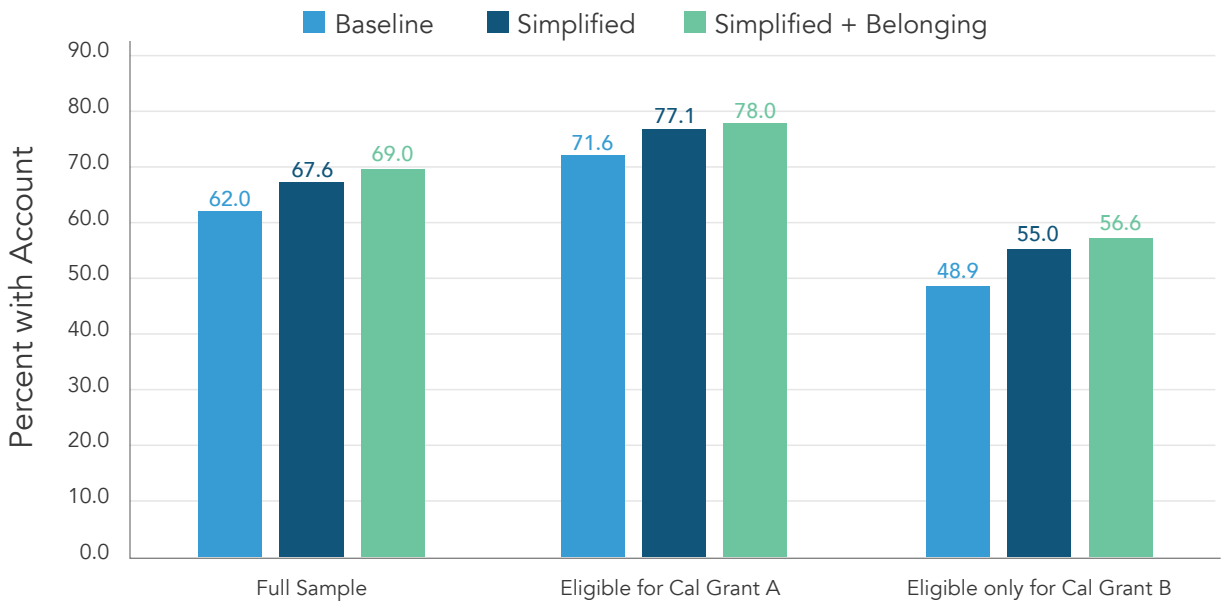


Figure 3 displays the share of students in each treatment arm who had registered for accounts by the second week of June. As noted above, this was 62.0% for students who had received the baseline letter, 67.6% for students who had received the simplified letter, and 69.0% for students who had received the simplified letter with the additional belonging language. Table 2 also shows the estimated effects of the two simplified letters relative to the baseline letter, and of the Simplified + Belonging letter relative to the Simplified letter, in each case after controlling for day-of-week and calendar date effects as discussed above. Students who received the Simplified letter were 5.7 percentage points more likely to create WebGrants accounts than students who received the baseline letter. Students who received the Simplified + Belonging letter were 8.5 percentage points more likely to create accounts than those who received the baseline letter and 2.8 percentage points more likely than students who received the Simplified letter, without the additional belonging language. All of these differences are statistically significantly different from zero.

Table 2: Effects of Treatment Status on WebGrants4Students Account Creation

	Baseline	Simplified	Simplified + Belonging
Share of Students with WebGrants Accounts	62.0%	67.6%	69.0%
Effects of Treatment Relative to Baseline		+5.7 percentage points (+9.2%)	+8.5 percentage points (13.7%)
Relative to Simplified			+2.8 percentage points (+4.1%)

The study sample included students eligible for the Cal Grant A, students eligible for the smaller Cal Grant B award, and students who qualified for both. Cal Grant B students come from lower income families and may have lower GPAs. Table 3 presents estimates of the effects of letters on account registrations separately for students who were and were not eligible for Cal Grant A, with the former group including those who were eligible for both programs. (We divide in this way because the letter content was better targeted to Cal Grant A students than to those eligible only for Cal Grant B.) The baseline registration rate was much lower for the lower-income group, but the improved letters were if anything more effective for these students than for the higher-income Cal Grant A students.

Table 3: Estimated Effects of Treatment Variants 1 and 2 on Cal Grant A & Cal Grant B-eligible Students.

	Eligible for Cal Grant A (N=75,295)	Eligible only for Cal Grant B (N=54,663)
Share of Baseline Group with WebGrants Accounts	71.6%	48.9%
Effect of Simplified Letter Relative to Baseline	+5.3 percentage points (p.p.)	+6.2 p.p.
Effect of Simplified + Belonging Letter Relative to Baseline	+7.7 p.p.	+8.8 p.p.
Effect of Simplified + Belonging Letter Relative to Simplified	+2.4 p.p.	+2.6 p.p.

Notification Letters Planned for 2018–19

As discussed above, we are working with CSAC to test further improvements to the letters in 2018-19. A particular focus will be modifications aimed at improving students' understanding of the net costs of various college options. Applying to college and searching for financial aid can be a complex process, and there is evidence that students have a poor understanding of both the cost of college and the availability of financial aid that may be available to them to cover the cost. One common misunderstanding is about the relative costs of different types of colleges. Though community colleges are often thought of as the cheapest option given their relatively low tuition, the various aid sources accessible to students attending public four-year institutions can reduce the net price of a four-year institution to below the net price of a community college (TICAS, 2017).

The divergence between the full cost of college and net price of college - the cost borne by the student or their family after accounting for grant aid - was the driving factor underlying the 2011 federal requirement that all colleges and universities maintain net price calculators on their websites. These calculators, however,

are not always well publicized or easy to find, nor are they always easy to compare across colleges (Hopkins 2011; Nelson 2012). In the 2018-19 academic year, we will test notification letter variants that proactively provide students with net cost information from colleges' calculators. Costs will be computed for each of the California public institutions that the student listed on his/her FAFSA, using the student's FAFSA responses to fill in family economic resources that are needed to feed the calculators. The FAFSA allows students to select a different living situation – on campus, off campus, or with parents – for each institution they select to receive their form, and this will be used to generate appropriate cost estimates.

As noted above, there are many students for whom a UC or CSU may end up costing less than a community college. Consider the hypothetical example below of a student from a family of four, with family income of $30,000. Table 4 presents estimates extracted from four colleges' net price calculators for this student, using one set of potential responses regarding residency plans. The table shows the amounts each college or university estimates a student will pay for tuition and fees, room and board, books and supplies, and other expenses, which are added together for the total cost of attendance at each school. The table also shows the student's estimated Cal Grant A amount, the additional estimated grant aid a student can expect to receive, and the sum of those figures as the total grant aid.[5] The total grant aid is subtracted from the total cost to give the student's estimated net cost of attending a given college.

Table 4: Net Price of Different Institutions

	UC Berkeley	San Francisco State University	Cal State LA	Long Beach Community College
Living On Campus/ Off Campus/With Parents	On Campus	On Campus	Off Campus	Off Campus
Costs				
Tuition & Fees	$17,048	$6,476	$6,632	$1,182
Room & Board	$18,144	$13,434	$14,502	$12,492
Books & Supplies	$916	$1,860	$1,948	$1,791
Other Expenses	$3,048	$2,878	$2,974	$4,399
Total Cost of Attendance	**$39,156**	**$24,648**	**$26,056**	**$19,864**
Grant Aid				
Cal Grant	$12,630	$5,742	$5,742	$1,672
Other Grants	$17,726	$7,561	$7,215	$4,143
Total Grant Aid	**$30,356**	**$13,303**	**$12,957**	**$5,815**
Estimated Net Price	**$8,800**	**$11,345**	**$13,099**	**$14,049**

For this particular student, the calculator indicates that net costs would be higher at Long Beach Community College than at any of the four-year institutions, due to differences in the value of Cal Grants and institutional aid. This is a fairly common situation.

We are working with CSAC to design a letter that presents this customized information in an accessible form. While the net cost figures shown in Table 4 are merely estimates and may not exactly correspond to a student's eventual cost or aid package, we believe that they are substantially more accurate than the typical students' prior knowledge about college costs and aid. In particular, we expect that most of the students receiving CSAC notification letters overestimate the cost of attendance and underestimate the aid available to them (e.g., Grodsky & Jones, 2007; Scott-Clayton, 2012; see also the review by The Institute for College Access and Success, 2008), so that this information will lead them to revise downward their cost estimates of attending college in general, and four-year colleges in particular.

If we are correct that the provision of net cost estimates will improve students' information sets and lead them to revise downward their assessments of the net cost of college, this may lead some students to choose to attend college who would not have otherwise, and may lead some others to select a four-year college rather than a community college. These are the outcomes we will measure.

One important limitation of our study – both the initial version in 2017-18 and the planned version in 2018-19 – is that CSAC's notification letters only go out after students have filled out a FAFSA. This is generally too late in the process to enable improved information to influence students' decisions on where to apply for admission (though it may affect potential transfer decisions in subsequent years). Nevertheless, we think it is possible that this intervention will have an effect, by framing students' thoughts and plans at a stage when there are few decisions to be made but college may be seeming less and less distant in the future. We view it as a proof of concept – if it is possible to influence take-up or enrollment at this late date, among a relatively well-informed subpopulation, then there should be significant opportunities to increase participation in the Cal Grant program through better information and support at other stages in the application cycle as well.

Discussion

Students finishing high school must make highly consequential decisions about whether to attend college and where to enroll, with enormous financial implications for their families. Many have very little access to college counseling, and it is not easy for them to find accurate information about the costs of their different options or about how to access available aid.

The Cal Grant program is intended to make college affordable for low- and moderate- income students. But it can have only limited effects on these students' educational attainment if the students do not find out about the award until after they are already in college. In order for this aid to influence students' college choices, they must understand its financial implications before they must enroll.

The early evidence from our pilot study in 2017-18 indicates that clearer presentation of information about the Cal Grant in the preliminary notification letter can help in reaching students. Those who received simplified letters were substantially more likely to register for WebGrants4Students accounts by June of their senior year of high school. Even more encouraging, those who received letters emphasizing that they

belonged in college were more likely to register than those who received nearly identical letters without that emphasis. This is a strong suggestion that our evidence on account registrations reflects differences in students' views of college more generally. We will not know for several more months whether the provision of more accessible information in the notification letter will translate into different college choices. Nevertheless, the initial evidence is encouraging enough to justify moving ahead with additional efforts in the 2018-19 academic year to further improve the informational value of the Cal Grant notification letters.

The importance of these findings extends beyond registering for the Cal Grant. Myriad programs and services require outreach to potential recipients, and many eligible beneficiaries do not take up programs they are entitled to. Although this project focused on tweaking the primary notification letter, the lessons around better design and the principles of behavioral science can be applied by CSAC in communications to other student groups, and at other points in the process where CSAC interacts with students. These could include adjusting how CSAC does outreach to increase college readiness, how CSAC communicates with students when it's time to renew grants, or how CSAC explains the process of transferring from community college to a four-year school. Importantly, these lessons are also useful for agencies that administer other programs, from nutrition assistance to tax benefits.

The results also demonstrate the value of research partnerships between academics and public agencies. In this project, we were able to apply lessons from the academic behavioral science literature to make substantial improvements in the Cal Grant notification letters, a priority for the leadership of the California Student Aid Commission. We were able to do so by incorporating both the design of the letters and the evaluation of the project in the day-to-day operations of CSAC, allowing for timely and relevant results. We look forward to continuing the California Policy Lab partnership with CSAC, working together to further improve their outreach and student support efforts, and to measure the impacts of those improvements, in the years to come.

Acknowledgements

We are very grateful to the California Student Aid Commission for its role in this project. Lupita Alcalá, David O'Brien, Catalina Mistler, and Jessica Moldoff in particular, were close collaborators at every stage. We also thank Christian Osmeña for his assistance in fostering this collaboration. Miranda Boyden provided excellent research assistance. Laura Szabo-Kubitz and Jessica Thompson of The Institute for College Access and Success provided helpful feedback on an early draft of this paper. Finally, we are grateful for financial support to the Abdul Latif Jameel Poverty Action Lab and the Laura and John Arnold Foundation.

ENDNOTES

[1]Other varieties of Cal Grants serve transfer students, students enrolled in vocational programs not leading to degrees, undocumented students, and students returning to school more than a year after finishing high school. Our work with CSAC on preliminary notification letters did not address these programs, and we do not discuss them here.

[2]Under a new law, the time limit will be 8 years for students who are or were formerly foster youth. In addition, students can take a leave of absence for up to one year (in total over the college career) without losing their awards.

[3]A separate set of programs is available for undocumented immigrants covered by AB 540 (a part of a set of bills known as the "California Dream Act"). Our notification letter intervention did not apply to these students.

[4]In 2016, the FAFSA open date changed from January 1st to October 1st, allowing students to file their applications as much as three months earlier.

[5]The net cost calculators do not report the value of the Cal Grant separately, but rather report the total grants that will be available. We assume that for Cal Grant A students this will reflect the full value of the Cal Grant, and separate that into the Cal Grant and "other grants" accordingly. Note that the calculators generally do not collect enough information to accurately assess Cal Grant eligibility, so report the same total value of grants for those who do and do not qualify for Cal Grants. In effect, they assume that Cal Grants fully crowd out institutional aid. We believe that this is a reasonable approximation, at least at the four-year institutions.

REFERENCES

Bargava, S. & Manoli, D. (2015). Psychological frictions and the incomplete take-up of social benefits: Evidence from an IRS field experiment. *American Economic Review. 105*(11), 3489-529.

Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2009). *The role of simplification and information in college decisions: Results from the H&R Block FAFSA experiment* (NBER Working Paper No. 15361). Cambridge, MA: National Bureau of Economic Research.

California Student Aid Commission. (2016). Cal Grant handbook. Retrieved from https://www.csac.ca.gov/sites/main/files/file-attachments/calgrant_handbook.pdf

California Student Aid Commission. (2018). Cal Grant income and asset ceilings. Retrieved from https://www.csac.ca.gov/post/cal-grant-income-and-asset-ceilings.

Card, D. (1999). The causal effect of education on earnings. In Ashenfelter, O. & Card, D. (Eds.) *Handbook of Labor Economics, 3*(Part A). Amsterdam, Netherlands: Elsevier. Retrieved from https://econpapers.repec.org/RePEc:eee:labchp:3-30

Card, D. (2001). Estimating the return to schooling: Progress on some persistent econometric problems. *Econometrica, 69*(5), 1127–1160.

Cohodes, S. R., & Goodman, J. S. (2014). Merit aid, college quality, and college completion: Massachusetts' Adams scholarship as an in-kind subsidy. *American Economic Journal: Applied Economics, 6*(4), 251–285.

College Board (2017). *Trends in student aid 2017 (Trends in higher education).* Retrieved from https://trends.collegeboard.org/sites/default/files/2017-trends-student-aid_0.pdf

de Alva, J. K., & Schneider, M. (2013). *What's the Value of an Associate's Degree? The Return on Investment for Graduates and Taxpayers.* Washington, D.C.: AIR.

Fox, M.A., Connolly, B.A., & Snyder, T.D. (2005). *Youth indicators 2005: Trends in the well-being of American youth* (NCES 2005–050). Washington, DC: U.S. Government Printing Office.

Goodman, J., Hurwitz, M., & Smith, J. (2017). Access to 4-year public colleges and degree completion. *Journal of Labor Economics, 35*(3), 829–867.

Grodsky, E., & Jones, M. T. (2007). Real and imagined barriers to college entry: Perceptions of cost. *Social Science Research, 36*(2), 745–766.

Hopkins, K. (2011, December 15). 10 things you need to know about net price calculators. Retrieved from https://www.usnews.com/education/best-colleges/paying-for-college/articles/2011/12/15/10-things-you-need-to-know-about-net-price-calculators

Holzer, H. (2018, June 6). Workers without college degrees deserve a shot at the middle class. Retrieved from https://bidenforum.org/workers-without-college-degrees-deserve-shot-middle-class-4f8af71ce341

Ma, J., Pender, M., & Welch, M. (2016). *Education pays 2016: The benefits of higher education for individuals and society (Trends in Higher Education).* New York, NY: College Board.

Martorell, P., & Friedmann, E. (2018). Money left on the table. *Research Brief, 3*(3). Davis, CA: Wheelhouse.

National Center for Higher Education Management Systems. (2018). College-going rates of high school graduates - directly from high school. Retrieved from http://www.higheredinfo.org/dbrowser/?year=2014&level=nation&mode=data&state=0&submeasure=63

Nelson, L. (2012, August 14). Net price vs. out of pocket. Retrieved from https://www.insidehighered.com/news/2012/08/14/some-net-price-calculators-could-lead-students-take-debt

Oreopolis, P. & Petronijevic, U. (2013). *Making college worth it: A review of research on the returns to higher education* (NBER Working Paper No. 19053). Cambridge, MA: National Bureau of Economic Research.

Scott-Clayton, J. (2012). *Information constraints and financial aid policy* (NBER Working Paper No. 17811). Cambridge, MA: National Bureau of Economic Research.

Scott-Clayton, J. (2015). The role of financial aid in promoting college access and success: Research evidence and proposals for reform. *Journal of Student Financial Aid, 45*(3): 7-22.

Seltzer, R. (2017, October 25). Net price keeps creeping up. *Inside Higher Ed.* Retrieved from https://www.insidehighered.com/news/2017/10/25/tuition-and-fees-still-rising-faster-aid-college-board-report-shows

The Institute for College Access & Success. (2008). Paving the way: How financial aid awareness affects college access and success. Retrieved from https://ticas.org/sites/default/files/pub_files/Paving_the_Way.pdf

The Institute for College Access & Success. (2017). What college costs for low-income Californians. Retrieved from https://ticas.org/sites/default/files/pub_files/what_college_costs_for_low-income_californians.pdf

The Institute for College Access & Success (2018). Pell grants help keep college affordable for millions of Americans. Retrieved from https://ticas.org/sites/default/files/pub_files/overall_pell_one-pager.pdf

Wilbur, T. G., & Roscigno, V. J. (2016). First-generation disadvantage and college enrollment/completion. *Socius, 2.*

Sample Baseline Letter

California Student Aid Commission

BASELINE LETTER

CALGRANT
Making college financially accessible

Cal Grant Preliminary Eligibility Notification

- [redacted]
- [redacted]
- [redacted]

Date 01/19/2018
CSAC ID Number [redacted]

Congratulations!

You have been awarded a preliminary Cal Grant award for the 2018-19 academic year!

Governor Edmund G. Brown Jr., the Legislature and the California Student Aid Commission (CSAC) are investing in YOU because of your academic achievements and determination. Based on the information you provided to CSAC on your Free Application for Federal Student Aid (FAFSA) or California Dream Act Application (CADAA) as well as your GPA, you have been determined to be preliminarily eligible for a Cal Grant.

Cal Grant award amounts vary by the type of college you choose to attend and enrollment status. These are the current Cal Grant maximum amounts you could receive if you enroll at an eligible California campus in the following segments:

College Segment	Maximum Cal Grant Award Amount
California Community College (CCC):	$1,672
California State University (CSU):	$5,742*
University of California (UC):	$12,630*
Private, Non-Profit or WASC-accredited colleges:	$9,084*
Non-WASC accredited For-Profit Colleges:	$4,000*

*Cal Grant B students may also receive a $1,672 access award in addition to the amount listed above.

In addition to a Cal Grant you are potentially eligible for a Federal Pell Grant, for approximately $ 5920

These grants, and any other financial aid that you might receive, will help you cover the costs of attending college, which include tuition and fees, food and housing, and books and supplies.

The Cal Grant and Pell Grant do not require repayment and is only one part of your financial aid package. After you are admitted, the campus financial aid office will provide a full financial aid award notice. In addition to the Cal Grant and Pell Grant, you may also be eligible for one or more of the following:

- Institutional grants or scholarships offered at public and private colleges and universities;
- California College Promise Grant;
- Work-Study Program or Federal Student Loans;
- Other types of financial aid offered at your campus of attendance, such as private scholarships and student loans.

This is an initial Cal Grant award notification only. You must still apply for admission to the campus you plan to attend. Your college makes the final eligibility determination for Cal Grant prior to disbursing your award. For questions about final eligibility determination and disbursement dates, reach out to the financial aid office at your chosen campus.

Make California and your families proud by continuing and completing your education.
Claim your Cal Grant Award by logging onto WebGrants for Students at **www.csac.ca.gov/mygrantinfo**
See enclosed flyer for more information

Lupita Cortez Alcalá
Executive Director
California Student Aid Commission

E1PRP2 (11/17)

PRIVACY STATEMENT: Cal Grant information for students who are 18 years of age or older, or who have attended a postsecondary institution, will only be released to parents or guardians with written authorization from the student.

Sample Simplified Letter

SIMPLIFIED LETTER

- [redacted]
- [redacted]
- [redacted]

Date 01/19/2018
CSAC ID Number [redacted]

Dear [redacted],

Congratulations! Based on your hard work and record of academic achievement, you have been preliminarily selected to receive a **Cal Grant scholarship**. This scholarship will help you pay for the costs of college for all four years if you remain eligible. It does not need to be repaid.

Go to **www.csac.ca.gov/mycalgrantinfo** and take the first step to claim **your** scholarship!

Grant ID number: [redacted]
CSAC ID number: [redacted]

As you research different college options, remember that **the Cal Grant is designed so that tuition cost doesn't determine which college you choose to attend**. The maximum amounts you would receive are listed below:

College Segment	Maximum Cal Grant Award Amount
California Community College (CCC):	$1,672
California State University (CSU):	$5,742
University of California (UC):	$12,630
Private, Non-Profit or WASC-accredited colleges:	$9,084
Non-WASC accredited For-Profit Colleges:	$4,000

In addition you may be eligible for a living stipend of up to $1,672 per year, and for other grants, such as an estimated $ 1170 in a Federal Pell Grant.

Good luck with your applications! You are already on your way to becoming a college graduate!

Sincerely,

Lupita Cortez Alcalá
Executive Director
California Student Aid Commission

E1TG12 (11/17)

PRIVACY STATEMENT: Cal Grant information for students who are 18 years of age or older, or who have attended a postsecondary institution, will only be released to parents or guardians with written authorization from the student.

Sample Simplified + Belonging Letter

SIMPLIFIED + BELONGING LETTER

- [redacted]
- [redacted]
- [redacted]

Date 01/19/2018
CSAC ID Number [redacted]

Dear [redacted],

Congratulations! Based on your hard work and record of academic achievement, you have been preliminarily selected to receive a **Cal Grant scholarship**. This scholarship will help you pay for the costs of college for all four years if you remain eligible. It does not need to be repaid.

You have shown that you're the kind of person who belongs in college.
We've been working hard to help you get there!

Go to **www.csac.ca.gov/calgrantinfo** and take the first step to claim **your** scholarship!

Grant ID number:
CSAC ID number: [redacted]

As you research different college options, remember that **the Cal Grant is designed so that tuition cost doesn't determine which college you choose to attend**. The maximum amounts you would receive are listed below:

College Segment	Maximum Cal Grant Award Amount
California Community College (CCC):	$1,672
California State University (CSU):	$5,742
University of California (UC):	$12,630
Private, Non-Profit or WASC-accredited colleges:	$9,084
Non-WASC accredited For-Profit Colleges:	$4,000

In addition you may be eligible for a living stipend of up to $1,672 per year, and for other grants, such as an estimated $ 5920 in a Federal Pell Grant.

Good luck with your applications! You are already on your way to becoming a college graduate!

Sincerely,

Lupita Cortez Alcalá
Executive Director
California Student Aid Commission

E1TG22 (11/17)

PRIVACY STATEMENT: Cal Grant information for students who are 18 years of age or older, or who have attended a postsecondary institution, will only be released to parents or guardians with written authorization from the student.

BUILDING CAPACITY TO IMPROVE FINANCIAL AID ADMINISTRATION

By Nicholas Hillman[1]

California makes significant investments in student financial aid and this subsidy is a powerful tool for promoting college access and affordability. Well-designed and executed financial aid programs can also encourage students to complete college, specifically when well-targeted to students with the greatest need. How can California ensure its financial aid programs better support today's college students? One critical but often overlooked answer is to invest in the capacity of campus financial aid offices that work most closely with students. If institutional financial aid operations do not have adequate technological, financial, or human resources, then financial aid programs will be suboptimally implemented and students will not receive the full range of benefits aid can offer. But by making strategic investments through a *capacity building fund,* state policymakers can help professionals serve students better while being more effective stewards of public resources. This essay outlines the need for a capacity building fund and identifies promising ways California could use this approach when redesigning its aid programs.

Financial Aid Administration: Much More than Cutting Checks

The administration of financial aid is far more complicated than simply cutting checks to students. Aid administrators do community-based outreach to help prospective students understand how–and how much –to pay for college. They also help students make informed decisions about their financial aid options while navigating administrative hurdles like filing deadlines, being selected for verification, clearing administrative holds, and meeting Satisfactory Academic Progress. Aid administrators counsel and advise students on a case-by-case basis, but they also monitor institutional, state, and national trends to see how their students fare compared to internal benchmarks and other colleges and universities. Financial aid offices even play a growing role in enrollment management where aid can be a recruitment and retention tool for students. These are only a few examples of the work financial aid administrators do–or strive to do–in their pursuit of supporting student success, making it clear they play a key role in connecting state aid programs to student success. Financial aid does not simply appear in a student's account; it takes a significant amount of outreach, counseling, monitoring, and reporting to ensure aid is being administered effectively.

Because of this, it is important to support the people most directly involved in delivering aid and to ensure they have the capacity necessary to do so effectively. Financial aid is not just about awarding students money but more about supporting their overall wellbeing so they can be academically successful. Studies are trying to disentangle the effect of money from other multifaceted support services that are sometimes coupled with aid.

For example, a randomized control trial in Nebraska found additional aid increased enrollment and retention–particularly students of color and those with lower grades–but coupling aid with Learning Communities *may* make these effects stronger (Angrist, Autor, Hudson, & Pallais, 2016). Similarly, a randomized control trial in Wisconsin that targets need-based aid to low-income students found positive effects of aid on degree completion (Goldrick-Rab, Kelchen, Harris, & Benson, 2016). And these correspond with similar findings in Florida's need-based aid program (Castleman & Long, 2016).

When aid is combined with support services, like North Carolina's *Carolina Covenant* program, students are more likely to persist when they also have mentoring programs to help navigate campus (Clotfelter, Hemelt, & Ladd, 2018). Similarly, an evaluation of the *Dell Scholars* program found personalized advising in addition to financial aid boosted retention and degree completion (Page, Kehoe, Castleman, & Sahadewo, 2017). And an evaluation of CUNY's ASAP program showed how financial aid coupled with academic supports and money to help pay for transportation improved degree completion for full-time students (Scrivener et al., 2015). Non-financial supports like text message reminders and linking students with counselors who help navigate the college application, financial aid, and post-college enrollment processes have also improved access and retention (Bettinger & Baker, 2014; Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2012; Castleman & Page, 2016; Castleman & Goodman, 2016).

Designing a Capacity-Building Fund

Colleges that do not have the financial resources to create these programs or that are not in a position to experiment may be unlikely to adopt these promising practices. On the other hand, colleges with the greatest financial resources are in the best position to innovate if they have the staff, money, and technology to do so. Left unchecked, this can reinforce inequality where colleges with the least resources–and likely more financially needy students–will not be able to fully support their students while those already in a better position will. To avoid these negative outcomes and as a way to promote student success, California could consider a capacity-building fund to help low-resourced colleges adopt and sustain promising financial aid interventions like those described above.

Tennessee and Wisconsin used a similar approach when they transitioned to performance-based funding models. Under the new funding models, the state appropriates funds according to each college's score on various performance metrics. When colleges improve on a given metric, they will be eligible to receive more money from the state. This funding model can play to the advantage of colleges that are already high performers, so to equalize the playing field both states created "innovation funds" to help campuses adopt and scale promising student success initiatives.[2] In these states, funds were not targeted to financial aid programs; rather, they supported a wide range of student success initiatives. Over the course of two years, Tennessee invested $1.5 million to help campuses create new academic support services, convene advising teams, purchase technology and licenses, and link college coaches with students. In Wisconsin, the legislature set aside a one-time $5 million innovation fund to help campuses increase enrollment in high-demand academic degree programs. In both states, campuses had to apply for these competitive funds and justify how the programs would support state policy goals.

California could take a similar approach when redesigning its state aid program and the legislature is already moving in this direction by approving funds for financial aid technology upgrades.[3] The state could set aside a financial aid "capacity building fund" to help campuses develop and sustain evidence-based best practices. For example, if a financial aid office wants to implement a text message campaign nudging students to file their FAFSA, but does not have the staff or technology to do so, then this fund could help initiate that change. Similarly, a financial aid office may have ideas for linking students with academic and social supports on campus, but not the resources to do so effectively. This fund could give campuses the boost they need to ensure aided students are well supported in their academic pursuits.

By investing in the human and technological resources necessary to deliver high-quality aid programs, financial aid offices will have greater capacity to support student success. Such an investment comes with tradeoffs and considerations, so the following five questions should be answered prior to adopting a capacity building fund:

1. **What state revenue sources will pay for the fund?** The most likely funding source would be from the state's general appropriation, where the capacity-building fund could be a budget line-item. If this is not feasible, it may be worth considering a fee-based model that would generate funds to pay for itself. This revenue-neutral approach would require legislators to identify the fee source; for example, colleges that are not serving enough low-income students or that have the most resources could pay into the capacity-building fund each year. Budget line-items may be vulnerable if political or economic climates change and no longer support the fund. Similarly, a fee-based model will face opposition from those that pay the fees and may be framed as pitting campuses against one another. These are but two possible financing mechanisms, so legislators should consider these along with other funding approaches to make the fund possible.

2. **Who will determine how to allocate funds to campuses?** The state legislature or designee should establish a board to develop a process for soliciting and reviewing applications for capacity-building funds. This same board should establish the evaluation criteria and rank proposals accordingly. The board could then recommend funding allocations to the legislature, which would then allocate funds to campuses. Whether the state follows this guide or finds an alternative to be more workable, the goal is to clarify and communicate the internal procedures for reviewing and evaluating–and ultimately appropriating funds to–campuses based on their proposals. This process should have as few administrative hurdles as possible and should be designed with capacity constraints in mind. Campuses will be interested in these funds because they have limited resources, so the proposal/application process should minimize barriers for these very campuses.

3. **How will funds be sustained over time?** A one-time fund that runs out after the fiscal year may work against the long-term goal of building campus capacity to serve students well. While there may be some interventions that have high start-up costs that could be covered by a one-time fund, others will require ongoing support. There are two promising ways to promote sustainability over time. The first is to have campuses supplement state funds with their own campus resources (or private funds) after a phase-in period. For example, if a college wants to expand its outreach efforts, it may use the state's funds to cover start-up costs like convening key stakeholders and purchasing software and licenses. In some cases, these start-up costs are prohibitive and the state's support can be just what campuses need to innovate. If those initiatives require relatively lower costs to continue operations, then campuses would transition to their own existing budgets to sustain the innovation or the state would require matching funds for all post start-up years. A second approach is a collective impact model where the funds are not used to pay for a specific college's program but instead to fund collaborative efforts to solve financial aid problems.[4] For example, colleges could share a common software license or professional development program and the state pays for that pooled resource over time. This model may be more sustainable and cost efficient than paying for individual interventions at each campus if, and to the extent practicable, collaboration meets each campus' needs. Perhaps a mix of both approaches would maximize the sustainability of the fund

where it helps campuses phase-in and self-sustain interventions while also paying for collective efforts that may increase the political popularity or buy-in across multiple campuses.

4. **What channels will help campuses share results?** Successful organizational change incorporates feedback loops and internal learning into the improvement process. When the stakeholders involved in organizational change use data to monitor, assess, and develop strategies then this process can generate positive and sustainable change. A key to this success is sharing and disseminating findings within the organization and across organizations. Therefore, the state should not only consider how to pay for these capacity building efforts, but how to also disseminate findings to promote institutional improvement. The state or its designee reviewing proposals would be in a unique position to play a convening role, where they can identify which campuses are working toward common goals or implementing similar reforms, thereby helping to connect and facilitate organizational learning across campuses. Convening working groups and helping campuses generate and share data are important steps in the organizational learning and professional development process. Accordingly, the state may want to prioritize dissemination and collaboration in its call for proposals.

5. **How will the state monitor outcomes?** Each campus will have its own unique needs, goals, and contexts that shape its strategy for improvement. Because of this, the state should not monitor the fund with a one-size-fits-all approach. Instead, the state could think of the capacity building fund as performance contracts with each college (or collection of colleges), where those proposing certain activities will be expected to document their progress on implementation fidelity and how they are making improvement on their stated goals. This oversight should be done in the name of organizational improvement, where the state's role is to help campuses generate and share the necessary resources for achieving their goals. Campuses may not have the internal capacity to conduct rigorous assessments or evaluations of their efforts, so the state may consider contracting with an evaluation firm to offer technical assistance and/or conduct its own review of funded projects. In answering this question, it will be important to ensure the oversight is designed to promote organizational learning and internal improvement.

Conclusion

This essay outlines several promising strategies and design features to promote student success through financial aid policy. Instead of envisioning state aid as money that simply passes through colleges and into students' accounts, this essay highlights the importance of implementation and the role financial aid professionals play in student success. To the extent there are campuses that do not currently have capacity to adopt and bring to scale promising aid practices, a capacity building fund could be a promising way to administer aid programs more effectively. Doing so should not only result in a more cost-efficient aid delivery system, but will promote student success. Regardless of how/whether California reforms its financial aid programs, the ideas outlined here are important considerations for improving the implementation of financial aid programs to maximize their potential impacts on students – an outcome California taxpayers, elected officials, students, and campuses are likely to support.

ENDNOTES

[1] I would like to thank Derek Kindle and Ellie Bruecker of the University of Wisconsin-Madison, along with TICAS staff, for valuable feedback and suggestions to this version. Any errors or omissions are my own.

[2] See https://www.tn.gov/thec/bureaus/finance-and-administration/fiscal-policy/redirect-fiscal-policy/institutional-outcome-improvement-fund-grant-competition.html and https://docs.legis.wisconsin.gov/statutes/statutes/36/112

[3] See A.B 1809 http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1809 and S.B. 840, section 6870-101-0001 (6)(a)(8) http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB840

[4] See https://ssir.org/articles/entry/collective_impact

REFERENCES

Angrist, J., Autor, D., Hudson, S., & Pallais, A. (2016). *Updated results from a randomized evaluation of post-secondary aid*. Retrieved from https://www8.gsb.columbia.edu/faculty-research/sites/faculty-research/files/finance/Applied%20Microeconomics/Fall%202016/AAHP_20161017%20(2).pdf

Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis, 36*(1), 3–19. https://doi.org/10.3102/0162373713500523

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

Castleman, B., & Page, L. C. (2016). Freshman year financial aid nudges: An experiment to increase FAFSA renewal and college persistence. *Journal of Human Resources, 51*(2), 389–415. Retrieved from https://doi.org/10.3368/jhr.51.2.0614-6458R

Castleman, B., & Goodman, J. (2016). Intensive college counseling and the enrollment and persistence of low income students. *Education Finance and Policy*. Retrieved from http://www.mitpressjournals.org/doi/abs/10.1162/EDFP_a_00204

Castleman, B., & Long, B. T. (2016). Looking beyond enrollment: The causal effect of need-based grants on college access, persistence, and graduation. *Journal of Labor Economics, 34*(4), 1023–1073. Retrieved from https://doi.org/10.1086/686643

Clotfelter, C., Hemelt, S., & Ladd, H. (2018). Multifacted aid for low-income students and college outcomes: Evidence from North Carolina. *Economic Inquiry, 56*(1), 278–303.

Goldrick-Rab, S., Kelchen, R., Harris, D. N., & Benson, J. (2016). Reducing income inequality in educational attainment: Experimental evidence on the impact of financial aid on college completion. *American Journal of Sociology, 121*(6), 1762–1817. Retrieved from https://doi.org/10.1086/685442

Page, L. C., Kehoe, S. S., Castleman, B. L., & Sahadewo, G. A. (2017). More than dollars for scholars: The impact of the Dell Scholars program on college access, persistence and degree attainment. *Journal of Human Resources*, 0516-7935r1. Retrieved from https://doi.org/10.3368/jhr.54.3.0516.7935R1

Scrivener, S., Weiss, M. J., Ratledge, A., Rudd, T., Sommo, C., & Fresques, H. (2015). *Doubling graduation rates: Three-year effects of CUNY's accelerated study in associate programs (ASAP) for developmental education students*. Washington, DC: MDRC. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2571456

AUTHOR BIOGRAPHIES

Dr. Charlie Eaton

Charlie Eaton is an Assistant Professor of Sociology at UC Merced and an affiliated faculty member of UC Berkeley's Center for Studies in Higher Education. Eaton's research investigates the role of organizations in the interplay between economic elites and disadvantaged social groups. Eaton's primary current project asks how the rising power and wealth of finance has contributed to rising inequality in America since the 1980s. The project particularly examines how private equity, hedge funds, investment banks, commercial banks and their leaders entered the field of higher education administration and finance during this period.

Dr. Nicholas Hillman

Dr. Hillman is an associate professor in the University of Wisconsin-Madison's School of Education, where he studies higher education finance and policy. In addition to this appointment, he is a faculty affiliate in the university's Institute for Research on Poverty, La Follette School of Public Affairs, and Center for Financial Security.

Dr. Su Jin Gatlin Jez

Su Jin Gatlin Jez is an Associate Professor of Public Policy and Administration at California State University, Sacramento. She is also the Director of the CSU Student Success Network and a Faculty Associate with EdInsights. Through her work, Dr. Jez aims to strengthen student access, engagement, learning, and success in postsecondary education, particularly for traditionally underserved students. Her current research projects include examining the impact of wealth disparities on postsecondary experiences and outcomes, large scale evaluations of systems change efforts in the California Community Colleges, and understanding how public policy can improve the quality of for-profit colleges and universities.

Dr. Robert Kelchen

Dr. Kelchen's research interests focus on higher education finance and accountability policies, including student financial aid, college rankings, and program evaluation. His teaching interests include education finance, research methods, institutional research and planning, and organization and governance. His first book, Higher Education Accountability, was published by Johns Hopkins University Press in 2018. Selected as one of the 15 most indispensable academics on Twitter by The Chronicle of Higher Education, he was ranked #54 in the annual Edu-Scholar Public Influence Rankings of education faculty who are influential in policy discussions, and was the top-ranked assistant professor on the list.

Dr. Elizabeth Linos

Elizabeth Linos is an assistant professor of public policy at UC Berkeley. As a behavioral economist and public management scholar, her research focuses on how to improve government by focusing on its people. Prior to this role, she was the VP of the Behavioral Insights Team (BIT) in North America, working with governments across the US to improve programs using behavioral science. Dr. Linos holds a PhD in Public Policy from Harvard University, where she also completed her A.B. in Government and Economics.

Dr. Vikash Reddy

Vikash Reddy is a Policy Analyst with the California Policy Lab at UC Berkeley. He received his PhD in Education Policy from Teachers College, Columbia University. Before pursuing his doctorate, Vikash taught third grade at P.S. 213 in Brooklyn, NY, originally with Teach For America. Vikash holds a bachelor's degree in Government from Dartmouth College and a master's degree in Elementary Teaching from Pace University.

Amy Rose

Amy Rose joined the California Budget & Policy Center in June 2017 and focuses on criminal justice reform and higher education. She recently completed her master's degree in public policy and administration, with an emphasis on behavioral economics, from Northwestern University. Amy received her bachelor's degree in political science from the University of California, Berkeley, and has worked in various government and nonprofit institutions at the local, state, and federal levels. Amy is passionate about education, social justice, and community development.

Dr. Jesse Rothstein

Dr. Rothstein is professor of public policy and economics at the University of California, Berkeley, with affiliations in the Department of Economics and the Goldman School of Public Policy. He is also the director of the Institute for Research on Labor and Employment (IRLE); the co-director of the California Policy Lab; and the co-director of the Opportunity Lab. Rothstein's research focuses on education policy and on the labor market. His recent work includes studies of teacher quality, of school finance, of intergenerational economic mobility, and of the labor market during the Great Recession. Rothstein received a Ph.D. in economics and a Master's in Public Policy, both from the University of California, Berkeley, and an A.B. from Harvard.

the institute for
college access & success

1212 Broadway, Suite 1100
Oakland, CA 94612
510.318.7900

110 Maryland Ave, NE Suite 201
Washington, D.C. 20002
202.223.6060

info@ticas.org
www.ticas.org