



PPIC

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Making College Possible for Low-Income Students

Grant and Scholarship Aid in California

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Summary

Improving college access and completion is vital to California’s economic well-being. PPIC projections show that the state will need one million more college graduates with a bachelor’s degree by 2025 in order to satisfy labor force demand. As the costs of attending college have grown, grant and scholarship assistance for students has become increasingly necessary to make college accessible and affordable. This is especially true in California, where a majority of students come from low-income families (almost 60 percent of the state’s K–12 students qualify for free and reduced-price lunch programs). Were it not for grants and scholarships, many low-income students would be unable to participate in the higher education system.

In this study, we examine the role of grant and scholarship aid in California in making college more accessible and in helping students complete college. We find that:

- For many low-income students, college would not be possible without grant and scholarship aid, which has helped offset increases in tuition.
- Students who receive grants and scholarships are more likely to earn a bachelor's degree than otherwise similar students. These findings hold even after controlling for institutional characteristics and student characteristics, including high school grade point average and family income.
- Performance-based grants do not seem to have greater effects than other types of grants, largely because students already must meet institutional academic requirements to remain enrolled in college.
- An important role of aid is that it can induce students to attend four-year colleges rather than community colleges. Students are much more likely to earn a degree if they first enroll at a four-year college.

Research has shown that grants and scholarships help students persist in their education and graduate from college. Financial assistance enables and encourages students to focus on their coursework, rather than attending school part-time and working part-time jobs to finance their education. Grants and scholarships also enable many of these students to attend four-year colleges, which have higher completion rates than community colleges.

While California’s legislators have expressed concern about the sharp increase in tuition and fees at state colleges and universities, the rising costs are a direct result of these policymakers’ decision to reduce state fiscal support for public colleges and universities. Although grant and scholarship aid has grown and helped to offset these rising costs, it has not been able to fully make up the difference for some students.

And while the total financial assistance available through federal grants, Cal Grants, institutional aid, and private scholarships has increased, the *net* cost of attending college has risen for low-income students at the colleges they are most likely to attend (community colleges and the California State University)—i.e., students from low-income families are expected to pay a larger *share* of their family income than other students to attend college. One consequence of this is the heavy debt load shouldered by these students, many of whom need to take out loans to supplement any assistance they might be receiving through grants and scholarships.¹ A greater concern, of course, is that the higher costs will simply lock some low-income students out of

¹ According to data from the National Postsecondary Student Aid Survey for 2012, 61 percent of poor students (those with an expected family contribution of less than \$3,600) took out loans to attend college, compared to 45 percent of higher income students (those with an expected family contribution of at least \$17,000).

college, and that the role of higher education in providing a ladder of upward economic mobility will be compromised.

Legislators and higher education policymakers could undertake a number of steps to make college more affordable and accessible for low-income students. We offer the following recommendations:

- Adopt policies that help more students complete financial aid forms, specifically the Free Application for Federal Student Aid (FAFSA), so that more students can obtain the financial assistance for which they are eligible.
- Direct any additional funding that might be forthcoming toward more grant aid for low-income students. Student aid programs should focus in particular on increasing the size of grants so that they keep pace with inflation.
- Consider whether additional institutions should be deemed ineligible for state and federal grants. The state has already declared that about 200 institutions are ineligible for Cal Grants because of their low graduation rates and high student loan default rates. Federal policymakers should follow California's lead and implement similar restrictions for Pell Grants.
- Ensure that grant and scholarship aid does not exacerbate higher education cost inflation by determining ways to increase financial assistance without raising net prices. One way to accomplish this would be to require that colleges keep net prices below a certain amount for Cal Grant and Pell Grant recipients.
- And finally, policymakers should realize that attaching additional performance requirements to grant eligibility is not likely to improve student outcomes.

To ensure a brighter economic future for California, higher education must provide a ladder of opportunity and success for low-income students. A comprehensive and coherent set of financial aid policies, including grant and scholarship aid, would help promote educational affordability for all students who wish to pursue higher education.

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Introduction

Research has shown that both labor force demand and wages are much higher for workers with a college education, and economic projections suggest that this demand will increase in the future. The high cost of obtaining a college degree, however, has become a serious impediment for many students. Access to college is particularly challenging for low-income students, who comprise a majority of public K–12 students in California.² Reflecting concerns about affordability, most Californians (70%) say the price of college keeps qualified and motivated students from attending (Baldassare et al 2011).

As college costs have risen, grants and scholarships have become an essential resource for a great many students seeking access to higher education. These avenues of financial assistance are provided by federal and state governments, colleges, and private institutions; and unlike loans, grants and scholarships do not need to be repaid. The vast majority of grant and scholarship assistance in California is provided by public entities—i.e., the federal government, state government, and public universities—but private sources also represent an important component of financial aid.

As the costs of attending college have risen and access to higher education has declined, policymakers and educators are looking increasingly to grants and scholarships as an avenue for making college more accessible.³ The state and federal governments spend billions of dollars on student grants annually, but this gives rise to two key questions: Are these investments in our future sufficient? And are they distributed in an effective and equitable manner?

In this report, we describe the different types of grants and scholarships available in California and evaluate the degree to which they have helped to make the state’s higher education system accessible and affordable. We then evaluate the role of grants and scholarships in improving college completion and graduation rates, and we close with a discussion of the policy approaches and challenges facing program implementation. We consider all types of grants and scholarships but focus in particular on *public* financial assistance programs, since these are the areas where most policy levers exist. Because students from low-income families are more dependent than other college-bound students on grants and scholarships, we pay particular attention to how changes in this approach to financial assistance might affect these students. We also take a close look at how grant aid varies across the state’s major higher education segments: the community colleges, the California State University (CSU), the University of California (UC), private non-profit colleges, and private for-profit colleges. Many of our analyses include a consideration of federal grants or federal loans, known as Title IV funds. [Appendix A](#) offers a detailed discussion of our methods and data. [Appendix B](#) provides supplemental figures.

² According to the California Department of Education, 59 percent of the students enrolled in public K–12 schools in 2012–13 were “socioeconomically disadvantaged,” meaning that their family incomes were low enough to qualify for free or reduced price lunches.

³ PPIC studies have shown how reductions in state support have reduced access at the state’s public colleges and universities. See Bohn et al (2013) and Johnson (2012).

Sources of Grant and Scholarship Aid

More than half of all postsecondary students in California receive grant or scholarship aid, provided through the following sources:

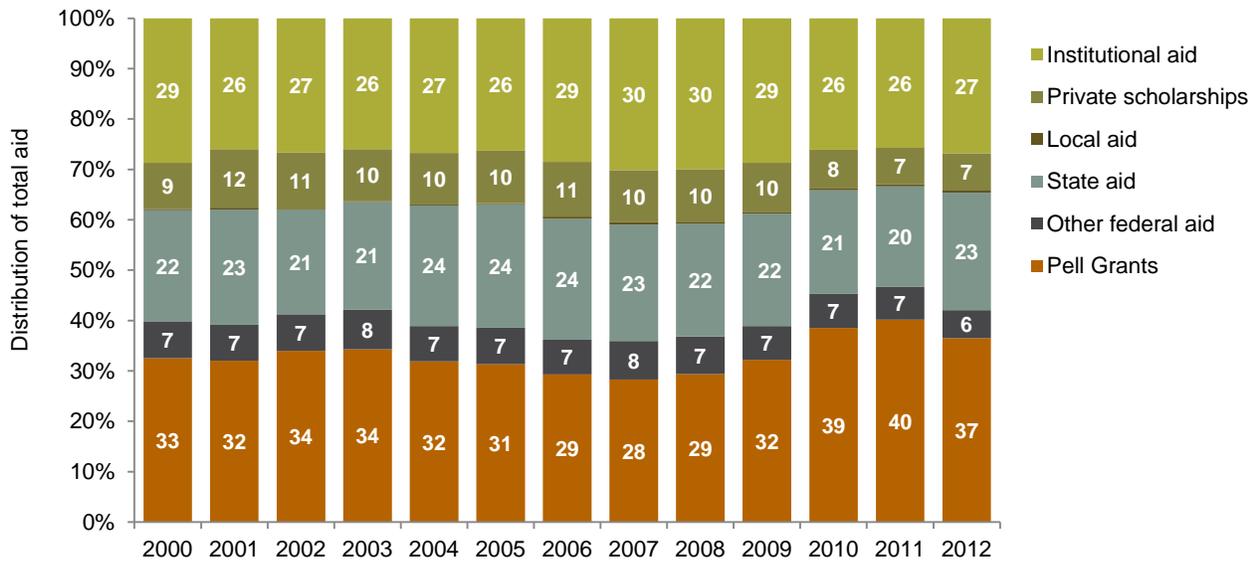
- The federal government, primarily through Pell Grants.
- State governments, primarily through the Cal Grant program and the Board of Governors fee waivers for community college students.
- Colleges and universities, which provide institutional grants directly to their own students.
- Private scholarships, such as those provided to students by philanthropic organizations, the largest of which is the College Access Foundation of California.

Almost two-thirds of grant aid in California is provided by the state and federal governments, with the federal government providing the largest share, primarily through its Pell Grants, which are available to any prospective student who demonstrates a financial need (see box below). The grants can be used for tuition or living expenses and are renewable for up to six years. The maximum amount of the grant in 2013–14 was \$5,645 for a full academic year, while the average amount was about \$2,500. Students must attend an eligible postsecondary institution to receive the grant—nationally, more than 7,000 institutions are eligible, including many vocational schools—and to continue receiving aid must maintain satisfactory progress (a minimum GPA of 2.0 and no academic probation). Other sources of federal aid include scholarships and programs for military personnel, but total expenditures are relatively small compared to Pell Grants (see Figure 1).

Determining Financial Need

Colleges vary in their determination of financial need, but almost all use a student's income and assets to calculate an "expected family contribution" or EFC. If the student is a dependent, then family income and assets are also considered, as well as other factors, such as family size and number of children in college. The financial need of a student is calculated as the difference between the total cost of attendance and the expected family contribution. The U.S. Department of Education uses the Free Application for Federal Student Aid (FAFSA) to determine eligibility for federal grant and loan programs, and almost all colleges use the FAFSA in their consideration of qualification for institutional aid. For example, California's Cal Grant program requires the FAFSA and a verified grade point average. Although public colleges and universities in California have a need-blind admissions policy, meaning that a student's ability to pay is not considered in the admissions process, many private colleges are need-aware, meaning that the ability to pay is considered in determining offers of admission. However, having a need-blind admissions policy does not mean that a college will fully meet a student's financial needs to attend the school. Indeed, very few colleges in California are both need-blind in admissions and willing or able to fully satisfy a student's financial needs through grants and scholarships.

FIGURE 1
Federal and state grants account for most student grant aid in California



SOURCE: Author’s calculations based on IPEDS data, 2011–12.

NOTE: State grant aid includes Board of Governors waivers.

In addition to federal programs, almost all states offer their own state-grant programs. The availability, size, and goals of the programs vary widely. In some cases, the intent is to encourage high school students with strong academic records to remain in the state. For example, Georgia’s program HOPE (Helping Outstanding Pupils Educationally) provides aid based solely on academic achievement, with no consideration of financial need. Because students strong in academics tend to come from middle- and high-income families, programs like Georgia’s tend to favor students who have less need of financial assistance. Indeed, Georgia’s HOPE scholarship program has been successful in keeping many college-bound students from leaving the state (Cornwell, Mustard, and Sridhar 2006). But for most states, including California, grant aid is both need- and merit-based: To be eligible for financial assistance, students must meet certain academic requirements and also demonstrate a need for financial help, as is the case for most students from low-income families.

In California, state-grant aid accounts for more than 20 percent of the total aid in the state. The Cal Grant program provides grants to state residents attending approved institutions, and Board of Governors (BOG) waivers cover fees for low-income students at the state’s community colleges. To be eligible for Cal Grants, approved institutions must meet minimum state standards with respect to graduation rates and loan default rates. In 2013, about 200 institutions were ineligible for Cal Grants, with almost all of them being private for-profit institutions. Three different types of grants are provided through the Cal Grant program.⁴ Cal Grant A provides support for tuition and fees and requires a minimum high school GPA of 3.0. Students must be pursuing an associate degree or bachelor’s degree to be eligible. For the lowest-income students, Cal Grant A provides full tuition and fees at UC (\$12,192) or CSU (\$5,472), up to \$8,056 in 2014–15 at private colleges accredited by the Western Association of Schools and Colleges (WASC), and up to \$4,000 at other private

⁴ Students cannot receive more than one type of Cal Grant in an academic year.

colleges. Cal Grant B provides additional grant aid up to \$1,473 for very low-income students to help pay for books and living expenses.⁵ Cal Grant C provides up to \$2,462 in tuition and \$547 for living expenses for vocational students.

CAL Grant Program Eligibility and Awards

California provides financial aid to its students through its Cal Grant programs. This report focuses on the two largest programs, the Cal Grant A and B entitlement programs. Lower- and middle-income graduating high school seniors who meet income eligibility criteria (for a family of four in 2014–15, income less than \$87,400 for Cal Grant A and less than \$45,900 for Cal Grant B) and who submit their application by the deadline are guaranteed a Cal Grant A or B. Students are required to have a grade point average of at least a 3.0 to receive a Cal Grant A award, which covers full tuition within the University of California and California State University systems. Cal Grant A also awards up to \$8,056 in tuition support for eligible, non-profit private colleges or up to \$4,000 for private for-profit colleges in 2014–15. Cal Grant B awards are for students with greater financial need who have at least a 2.0 grade point average, providing up to \$1,473 toward books and living expenses in the first year, and this amount plus tuition support (in the same amounts as Cal Grant A awards) beginning in the second year. Students may not enroll in both programs simultaneously. For more information regarding the Cal Grant programs, including information on the Cal Grant C Program, Transfer Program, Competitive Program, or college eligibility criteria, see the California Student Aid Commission website at www.csac.ca.gov.

The second leading source of grant aid is institutional aid provided by the colleges themselves. Institutional aid is distributed according to rules and policies established by each institution. Most private colleges in California use institutional aid to help middle- and low-income students afford the high tuition costs of those institutions, but increasingly such aid is used regardless of financial need to attract students with strong academic records (Kahlenberg 2011). California’s public universities (the UC and CSU systems) and community colleges also provide institutional aid, based solely on the financial need of prospective and current students.⁶ At UC, the “Blue & Gold Plan” provides grants to cover tuition and fees not covered by federal or state grant aid for in-state students from families with financial need and incomes below \$80,000. At CSU, the “State University Grant” provides tuition aid to students with an expected family contribution of \$4,000 or less.⁷

Finally, California legislators have recently established a new state scholarship program for students with family incomes up to \$150,000. Available for the first time in the 2014–15 academic year, this “Middle Class Scholarship” program will provide tuition assistance to UC and CSU students on a sliding scale based on

⁵ Most Cal Grant A and B awards are determined by eligibility and thus operate like an entitlement program. Cal Grant A and B grants can also be awarded to students who are not eligible for the entitlement awards, but these “competitive” awards are relatively small.

⁶ An exception is the relatively small merit scholarship program (e.g. the Regents Fellowship at UC).

⁷ In recent years, both UC and CSU have reserved one-third of the increase in tuition to provide grants to low- and middle-income students. UC and CSU also provide grant aid through their endowments and philanthropic donations.

family income, providing a tuition discount ranging from 10 to 40 percent. Unlike the Cal Grant program, this program is not an entitlement. Instead, individual award amounts will depend on the number of eligible students and total funding allocated in the state budget. Students will only receive the maximum amount if the demand does not exceed the allocated amount in the budget.⁸ The program is being phased in over the next few years, with the intention of total state funding reaching the maximum grant amounts in 2017–18.

Whether a student receives grant aid and the amount of that aid depend not only on the student’s financial and academic standing, but also on the college a student attends. Different types of institutions (private versus public, four-year versus two-year) provide very different amounts of aid (see Table 1). Some colleges rely heavily on the federal government to provide grant aid, while others offer a significant amount of institutional aid. For example, private for-profit colleges offer very little institutional aid, depending primarily on the federal government and students (often in the form of loans) to pay the costs of attendance. Private non-profit colleges provide the most institutional support, but as we discuss in the following section, that support only goes part way toward meeting their very high costs. Students at public four-year colleges rely primarily and in relatively equal levels on Pell Grants, Cal Grants, and institutional grants. In contrast, community college students receive relatively little in Cal Grants and institutional grants, relying primarily on Pell Grants and state aid through BOG waivers.

⁸ This means that students would receive less than the maximum award if the demand exceeds supply.

TABLE 1
Aid amounts vary by institution type

	Share of total aid by source (2011–12)							Total amount of aid (\$millions)	Students (FTE)	Aid per FTE (\$)
	Pell Grants (%)	Other federal grants (%)	State grants (%)	Local grants (%)	Private scholarships (%)	Institutional grants (%)	Total, all sources (%)			
CSU	39	1	53	0	1	6	100	1,929	353,900	5,450
UC	20	8	7	0	8	57	100	1,723	236,707	7,278
Private non-profit, 4-year	8	3	6	0	19	64	100	2,557	282,332	9,057
Private for-profit, 4-year	52	27	11	0	0	10	100	617	133,676	4,616
Community college (see note)	53	5	35	2	2	4	100	3,104	790,216	3,928
Private for-profit, 2-year	84	6	10	0	0	0	100	485	111,669	4,347
Private for-profit, < 2-year	96	2	2	0	0	0	100	197	62,251	3,612

SOURCE: Author's estimates based on IPEDS and BOG waivers reported by LAO.

NOTE: Distributions are based on total dollar value. UC excludes UCSF and Hastings. FTE (full-time enrollment) includes all students.

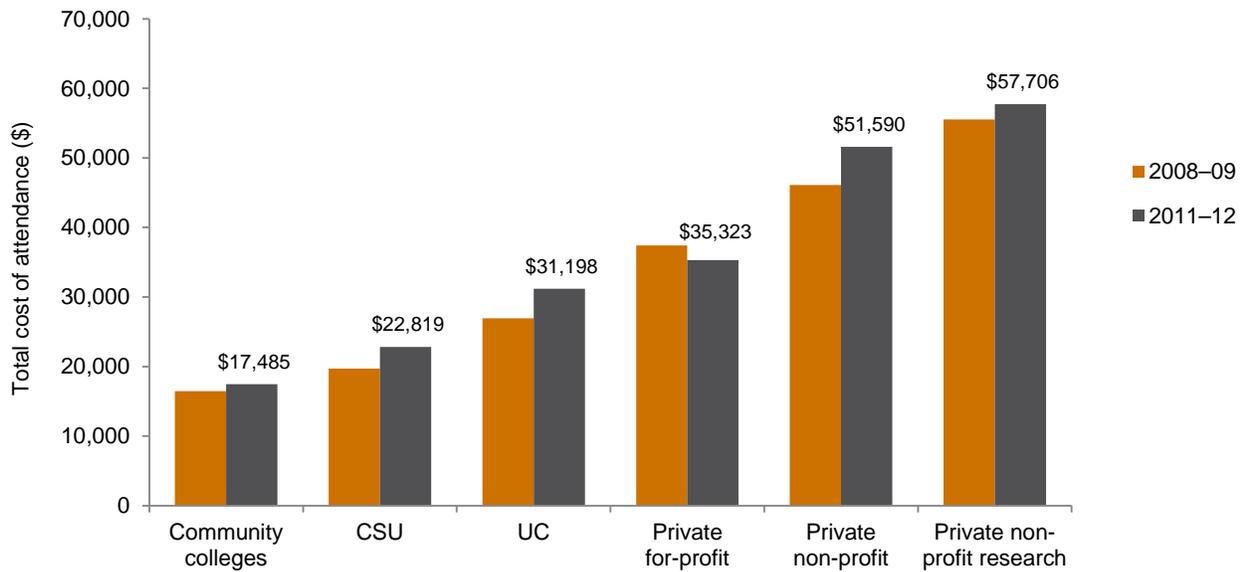
Is Higher Education Accessible and Affordable?

The importance of grant aid in promoting accessibility to college has been well established. For example, Nagoaka, Rederick, and Coca (2008) found that 80 percent of qualified students in Chicago who did not attend college cited cost and the need for financial aid as key factors in their decision not to attend college. A study of California's Cal Grant and institutional aid programs found that an increase in \$1,000 of grant aid was associated with a 9.2 percentage point increase in college enrollment.⁹ The availability of financial assistance can also affect a student's choice of college. Research has shown that more-generous aid leads students to choose four-year colleges rather than community colleges (Deming and Dynarski 2009). This is important because students are much more likely to complete a bachelor's degree if they begin their studies at a four-year college. Additional evidence (Kane 2003) shows that grant assistance can increase the likelihood that students choose private, non-profit, four-year colleges, which have among the highest completion rates for entering freshmen.

Although the importance of grant aid is well-known, a key concern is whether grant aid has kept pace with increases in the cost of attending college. The total cost of attending college, also known as the sticker price, has risen dramatically in recent years. The sticker price includes tuition and fees, room and board, books and other education expenses, and some allowance for living expenses. Sticker prices vary dramatically across colleges, with four-year colleges more expensive than community colleges, and private colleges more expensive than public colleges (Figure 2). The rapid increase in sticker prices has been largely driven by increasing tuitions, which also account for the large differences between schools. Tuition averages more than \$36,000 at California's private non-profit institutions, compared to about \$13,000 at UC and less than \$7,000 at CSU. In California, on a percentage basis, prices have risen most dramatically for public universities, a direct result of an increase in tuition, which itself was a response to declines in state subsidies. The University of California, once one of the least costly public research universities in the nation, has become one of the most costly (at least by sticker price). Although sticker prices have also risen substantially at private non-profit colleges, prices have declined at private for-profit colleges, which may reflect declining demand as these colleges have come under greater scrutiny, including, in many cases, restrictions on Cal Grant eligibility. At most colleges, though, sticker prices have increased notably, and if increases in aid have not kept pace with the rising sticker prices, then for most students college will be less affordable and therefore less accessible.

⁹ Deming and Dynarski (2009) provide an excellent review of the literature. The authors conclude that "the best estimates suggest that eligibility for \$1000 of subsidy increases college attendance rates by roughly 4 percentage points." Kane (2003) used regression discontinuity methods to estimate the effect of Cal Grant programs. Students eligible for the program were 3 to 4 percentage points more likely to enroll in college than otherwise similar students. However, according to Kane, this underestimates the relationship of grant aid to college enrollment because Cal Grants sometimes crowd out other grants. Accounting for crowding out, Kane finds a 9.2 percentage point difference in college-going per \$1000 in grant aid. This is substantially higher than the estimates of Deming and Dynarski which are based on a meta-analysis of numerous studies. It is possible that the effect is higher in California than elsewhere, or that the effects have changed over time (Kane's study was conducted in 2003).

FIGURE 2
Private colleges are more expensive than public colleges



SOURCE: Author's calculations based on IPEDS net price data.

NOTE: Total costs in January 2012 dollars, include room and board, tuition and fees, and other education costs. Restricted to institutions with total price and enrollment data. Virtually all public and private non-profit colleges report price and enrollment data. Total prices are weighted by number of undergraduate students in 2011-12. Two-year private colleges excluded.

How Does Grant Aid Affect the Cost of Attending College?

Total costs, or sticker prices, are offset by grant and scholarship aid. Although low-income students receive more grant aid than high-income students at all colleges, the gradient varies quite a bit (Table 2). Private non-profit colleges provide the most grant aid for all income groups, but they also have the highest sticker prices; much of this grant aid, especially for higher income students, is in the form of institutional aid. Private for-profit colleges, in contrast, provide the lowest grant aid amounts, even though they have higher sticker prices than public colleges; students at these colleges depend primarily on federal grant programs. California's public colleges and universities provide relatively little grant aid to high-income students. Unlike private non-profits, California's public colleges and universities direct almost all of their institutional aid to low- and middle-income students, supplementing federal and state grants which are also directed to middle- and low-income students. The University of California provides seven times more grant aid to low-income students than to high-income students, whereas private non-profits provide about twice as much grant aid to low-income students as to high-income students.¹⁰

¹⁰ Income ranges are set by IPEDS. Here and elsewhere we define low-income as family income of less than \$30,000, but the general patterns and relationships hold for students from the next highest income category (\$30,000-\$48,000). Appendix B contains additional information.

TABLE 2
Aid amounts vary by income and sector

	Total grant and scholarship aid per student, 2011–12						
	Full-time freshmen	Sticker price (\$)	Family income (\$)				
			0–30,000	30,000–48,000	48,000–75,000	75,000–110,000	110,000+
CSU	54,562	22,819	15,693	13,440	9,184	4,375	3,433
UC	36,183	31,198	22,438	21,060	17,344	9,981	3,097
Private non-profit, 4-year	24,268	51,590	32,725	32,028	28,231	22,092	14,975
Private for-profit, 4-year	5,921	35,323	8,022	7,917	5,287	4,659	5,798
Community college	95,661	17,348	11,327	1,660	779	107	—
Private for-profit, 2-year	2,804	29,494	9,662	9,572	7,435	5,681	7,595

SOURCE: PPIC, based on U.S. Department of Education data (IPEDS).

NOTE: Restricted to colleges that reported sticker prices and enrollment. Data are provided only for students who received federal funds (Title IV), including loans. Sticker price includes tuition, room and board, and other education expenses. Excludes BOG fee waivers for community colleges because community colleges do not report BOG waivers as state aid in their reports to IPEDS. For a full-time student in 2011–12, BOG waivers were equivalent to \$1,080. Data are not reported for community college students with family incomes over \$110,000 because of small sample sizes.

For students receiving financial aid through grants and scholarships (but not loans), the difference between sticker price and grant aid is the net price, arguably the most important measure of affordability. The net price is substantially lower than the sticker price across institutions and income categories.

Is Grant Aid Targeted to Students Who Can Least Afford to Pay?

Grant aid is especially important for low-income students, who have few other sources of financial aid, except for loans. For those students, the net price is dramatically lower at public colleges than at private colleges—well less than half the price. This reflects lower tuition at public colleges as well as the intentional policies of public universities to channel the great majority of their grant and scholarship support toward low- and middle-income students. Still, it should be noted that the difference in sticker prices between public colleges and private colleges is much greater than the difference in net prices. For example, in 2011–12 the average sticker price at private non-profit colleges was more than \$20,000 higher than the sticker price at UC and almost \$30,000 higher than the sticker price at CSU, but the net price differences for low-income students were much less, about \$10,000 higher than UC and about \$12,000 higher than CSU. Moreover, the difference in net price between private non-profit colleges and UC declines with family income. Indeed, net prices for high-income students at UC are only about \$8,000 lower than those at private non-profit colleges. In contrast, private for-profit colleges have substantially lower sticker prices than private non-profit colleges, but because they provide virtually no institutional grant aid, they are the most expensive in terms of net price.

TABLE 3
Net price varies by income and sector

	Full-time freshmen	Sticker price (\$)	Net price per student, 2011–12				
			Family income (\$)				
			0–30,000	30,000–48,000	48,000–75,000	75,000–110,000	110,000+
CSU	54,562	22,819	7,126	9,379	13,636	18,445	19,387
UC	36,183	31,198	8,760	10,138	13,854	21,217	28,101
Private non-profit, 4-year	24,268	51,590	18,866	19,563	23,359	29,498	36,615
Private for-profit, 4-year	5,921	35,323	27,301	27,406	30,036	30,664	29,525
Community college	95,661	17,348	6,021	15,689	16,569	17,241	—
Private for-profit, 2-year	2,804	29,494	19,832	19,922	22,059	23,813	21,899

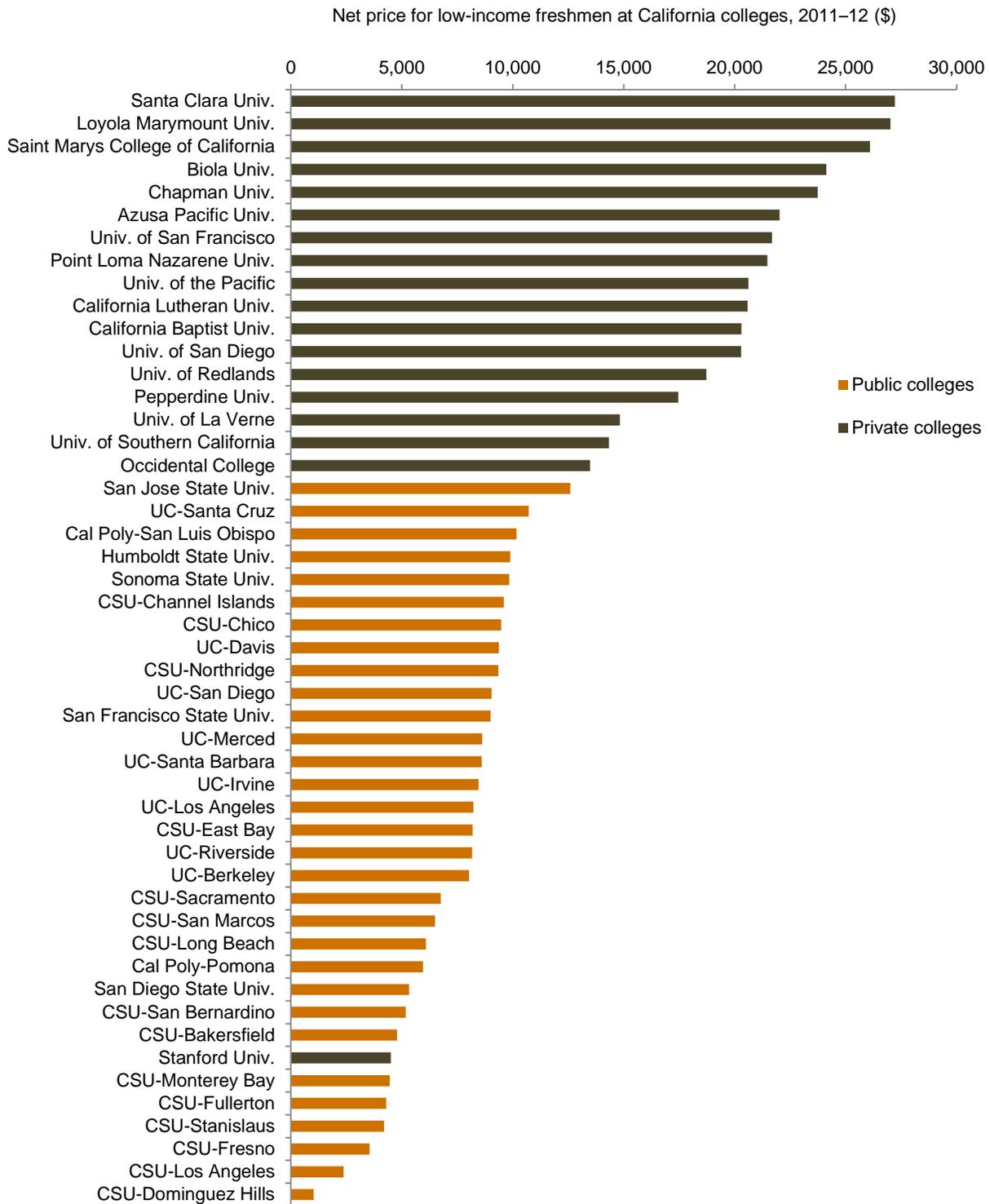
SOURCE: PPIC, based on U.S. Department of Education data (IPEDS).

NOTE: Restricted to colleges that reported sticker prices and enrollment. Data are provided only for students who received federal funds (Title IV), including loans. Sticker price includes tuition, room and board, and other education expenses less grant and scholarship aid. Excludes BOG fee waivers for community colleges. Data on BOG waivers by family income were not available. Community colleges do not report BOG waivers as state aid in their reports to IPEDS. For a full-time student in 2011–12, BOG waivers were worth \$1,080.¹¹ Data are not reported for community college students with family incomes over \$110,000 because of small sample sizes.

The broad institutional categories mask considerable variation in net prices across colleges. Among low-income students, the net price at Santa Clara University was more than \$27,000 in 2011–12, compared to only \$1,024 at CSU-Dominguez Hills (Figure 3). The most expensive public university for low-income students, San Jose State, was only slightly less expensive than Occidental College, one of the most affordable private non-profit colleges in the state. Private non-profit colleges have higher net prices than public universities, with one notable exception—Stanford University, one of the few colleges in California that is both need-blind in its admissions policy and that fully meets students’ financial needs, primarily through grants. Among low-income students, Stanford’s net price (\$4,501) is substantially lower than that at any UC campus, including Berkeley (\$8,024).

¹¹ The sticker price at community colleges consists almost entirely of living expenses and education costs other than tuition and fees. Higher net prices at community colleges than at UC and CSU for students with family incomes of \$30,000 to \$48,000 are primarily because these students do not receive aid for living expenses. The community colleges do not offer much institutional aid,

FIGURE 3
For low-income students, college costs are lower at public institutions



SOURCE: PPIC, based on U.S. Department of Education data.

NOTE: Restricted to four-year colleges with at least 500 first-time full-time freshmen. Low-income is defined as family income of \$30,000 or less. Data are only provided for students who received federal aid (including loans). Net price is the annual cost of tuition, room and board, and other education expenses minus any grant and scholarship aid. See Appendix B for charts for other income groups.

Which Colleges Do Low-Income Students Attend?

Of course, even if a college is relatively generous with grant aid among the low-income students it enrolls, that generosity doesn't go very far if it only enrolls a few low-income students. As shown in Table 4 and Figure 4, the vast majority of low-income students in California are enrolled in public colleges (85% of low-income freshmen receiving Title IV funds in 2011–12 attended a public college or university).¹² One reason for this is that public colleges tend to have much more capacity than private colleges, but another reason is that public colleges disproportionately enroll low-income students. For example, just over half of high-income freshmen receiving Title IV funds were enrolled in a public college in 2011–12. In contrast, private non-profit colleges enrolled more than 40 percent of all high-income freshmen, but only 5 percent of low-income first-time full-time freshmen receiving Title IV funds. Private for-profit colleges disproportionately enroll low-income students, enrolling 10 percent of all low-income freshmen in California compared to 4 percent of all high-income freshmen.

TABLE 4
Number of freshmen receiving Title IV funds by income and sector, 2011–12

	Number of freshmen receiving Title IV funds, by income group						
	Full-time freshmen	Total receiving funds	\$0–30,000	\$30,000–48,000	\$48,000–75,000	\$75,000–110,000	\$110,000 +
CSU	54,704	34,906	14,843	6,200	5,835	3,854	4,174
UC	36,183	20,627	8,046	4,036	3,654	2,293	2,598
Private non-profit, 4-year	27,168	17,087	3,817	2,248	2,909	2,798	5,315
Private for-profit, 4-year	9,679	7,836	4,766	1,206	863	505	496
Total 4-year colleges	127,734	80,456	31,472	13,690	13,261	9,450	12,583
Public community colleges	97,283	45,839	45,694	95	41	8	1
Private non-profit, 2-year	147	130	37	37	41	12	3
Private for-profit, 2-year	6,342	5,131	3,603	739	440	213	136
Grand Total	231,958	131,932	81,096	14,606	13,809	9,685	12,736

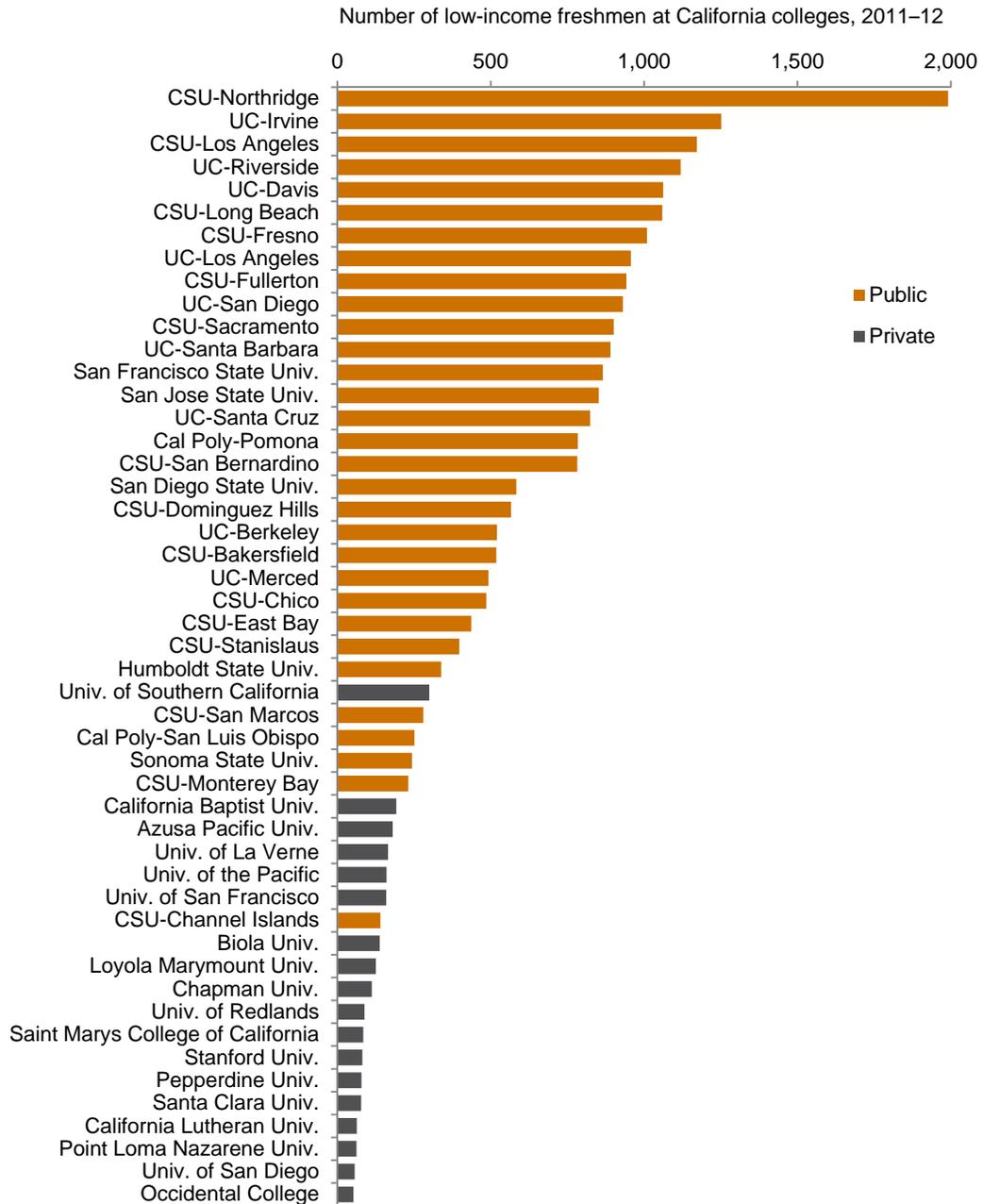
SOURCE: PPIC, based on U.S. Department of Education data (IPEDS).

NOTE: Restricted to colleges that reported sticker prices and enrollment. Excludes BOG fee waivers for community colleges. Data on BOG waivers by family income were not available. Community colleges do not report BOG waivers as state aid in their reports to IPEDS. UC excludes UCSF and Hastings.

On a college-by-college basis, just three public universities (CSU Northridge, UC Irvine, and CSU Los Angeles) enrolled more low-income freshmen in 2011–12 than all of the state's non-profit colleges combined. About half the students at CSU Dominguez Hills and CSU Los Angeles were from low-income families. In contrast, Stanford University ranked near the bottom of the list, with low-income students making up less than 5 percent of all freshmen. Among public universities, Cal Poly San Luis Obispo ranked last in the share of students from low-income families, at only 6 percent.

¹² Almost all degree-granting institutions receive Title IV funds. Title IV of the Higher Education Act of 1965 authorized federal programs for student financial aid, including Pell Grants and federal subsidized loans.

FIGURE 4
Most low-income freshmen enroll in public colleges



SOURCE: PPIC, based on U.S. Department of Education data.

NOTE: Restricted to four-year colleges with at least 500 first-time full-time freshmen. Low-income is defined as family income of \$30,000 or less. Data are only provided for students who received federal aid. See Appendix B for charts for other income groups.

Has Grant Aid Kept Up with Increases in Costs?

A key question is whether grant aid has kept pace with increases in sticker prices. For most low-income students in California, the answer is no. The community colleges and CSU enroll the vast majority of low-income students in the state; and between 2008–09 and 2011–12, increases in total costs exceeded increases in grant aid; thus, the net price rose at those institutions (Table 4). If we adjust for inflation, the increases amounted to 6 percent at each institution. In nominal dollars, however, the increases were not small, totaling

almost \$1,000 at CSU and more than \$600 at the community colleges.¹³ The news is a bit better at UC, with virtually no change in net price, and better still at private non-profits where net prices declined by almost \$1,000 (if we adjust for inflation). Sharper declines in net prices at private for-profit institutions reflect the reductions in tuition at these colleges, most likely attributable to their efforts to reverse declining enrollment, which has accompanied growing regulatory concern about the low completion rates and high loan default rates at many of these institutions.

TABLE 5
Net price for low-income students receiving Title IV funds, 2008–09 and 2011–12

	In January 2012 \$		Not adjusted for inflation	
	2008–09	2011–12	2008–09	2011–12
Community colleges	\$5,759	\$6,091	\$5,458	\$6,091
CSU	7,047	7,473	6,565	7,473
UC	8,795	8,746	8,193	8,746
Private for-profit	29,676	24,190	27,644	24,190
Private non-profit	20,190	19,216	18,807	19,216
Private non-profit research	10,874	11,191	10,130	11,191

SOURCE: PPIC, based on U.S. Department of Education data (IPEDS).

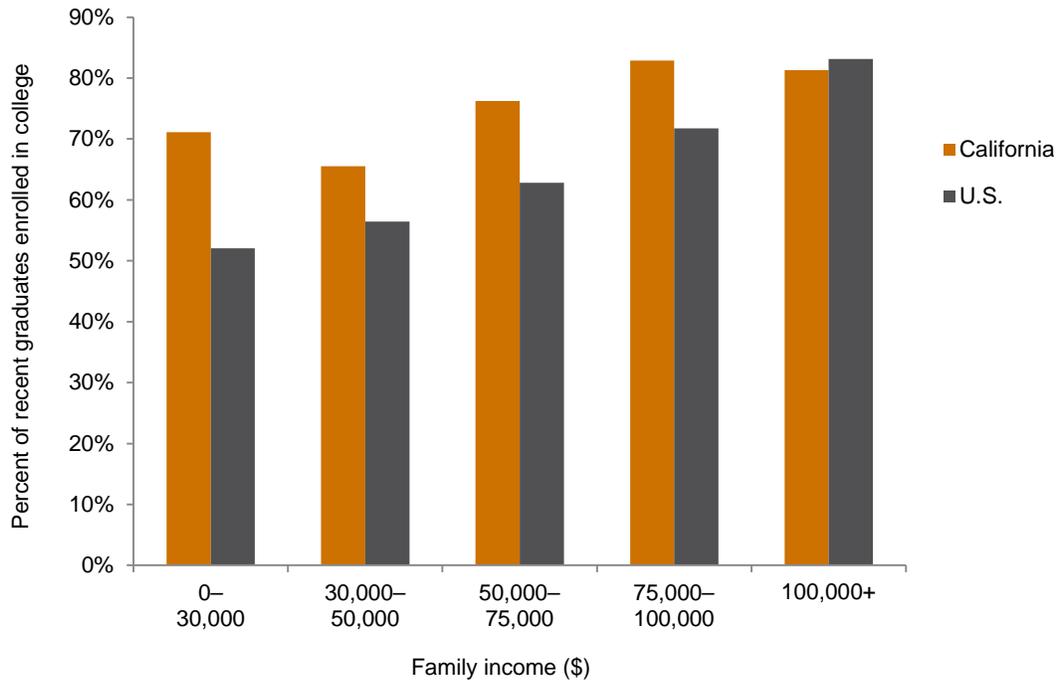
NOTE: Restricted to colleges that reported sticker prices and enrollment. Data are provided only for students who received federal funds (Title IV), including loans. Sticker price includes tuition, room and board, and other education expenses less grant and scholarship aid. Excludes BOG fee waivers for community colleges. Data on BOG waivers by family income were not available. Community colleges do not report BOG waivers as state aid in their reports to IPEDS. For a full-time student in 2011–12, BOG waivers were worth \$1,080.¹⁴ Data are not reported for community college students with family incomes over \$110,000 because of small sample sizes.

Perhaps the most important measure of grant aid is the extent to which it enables students to enroll in college. Although the data do not allow us to develop precise measures of the role of grant aid in current college enrollment rates in the state, we do know that California is relatively more generous than other states in supplementing federal grant aid with state grant aid. Moreover, California’s grant aid targets *low-income* students at public universities. As shown in [appendix Figures B1 and B2](#), among public universities in the fifty states, California has among the lowest net prices for low-income students and among the highest net prices for high-income students. The difference in net prices between high-income and low-income students is greater in California than in any other state. In other words, California’s public universities have relatively high sticker prices, but sharp discounting through grant and scholarship aid makes net prices for low-income students quite low by national standards. California’s focus on providing grant aid to low-income students is consistent with the state’s historic focus (embodied in the Master Plan for Higher Education) of making college accessible for low-income students; and the state’s relatively low net-price community college system attracts large numbers of low-income students. Indeed, California has a much higher share of low-income high school graduates enrolling in college than does the rest of the nation (Figure 5).

¹³ The number of students with family incomes of less than \$30,000 may have declined. The income range for low-income students is set at less than \$30,000 by IPEDS in their reporting system, and it is not adjusted for inflation.

¹⁴ The sticker price at community colleges consists almost entirely of living expenses and education costs other than tuition and fees. Higher net prices at community colleges than at UC and CSU for students with family incomes of \$30,000 to \$48,000 are primarily because these students do not receive aid for living expenses. The community colleges do not offer much institutional aid,

FIGURE 5
High school graduates from low-income families are much more likely to enroll in college in California than in the rest of the nation



SOURCE: Author’s analysis of October Current Population Survey data from 2008–2013.

NOTE: Not adjusted for inflation. Difference in enrollment rates for the two highest income groups in California is not statistically significant.

However, even with grant and scholarship assistance, low-income students dedicate a higher share of their income to college than other students. For example, on average, students from low-income families at UC are expected to contribute more than one-third of their income to pay for college, while the share for students from high-income families is around 20 percent. If we consider disposable income for low-income students, the share is higher still (TICAS 2013). This means that low-income students are more likely to take out loans to pay for college. At UC in 2011–2012, the large majority (73%) of graduating seniors from low-income families had to take out student loans to finance their educations, compared to only a small share (22%) of students from high-income families.¹⁵ In other words, while student aid is relatively generous in California and focused on low-income students, college is still less affordable for these students.

¹⁵ Average student loan debt was similar among those who assumed loans: \$19,300 among low-income students and \$19,900 among high-income students (UCOP 2013).

Does Grant Aid Improve Completion and Graduation Rates?

Students fail to complete college for many reasons, including financial constraints. Certainly it is well known that low-income students are less likely to finish college than other students, even accounting for differences in academic preparation and records. Surveys of students who drop out of college find that, indeed, financial constraints play an important role. In one survey, respondents not only cited the need to work as the primary reason for leaving college but also said that work and family commitments were the reasons for not being able to return to school. More than half of the respondents said that financial aid “that completely covered tuition and books” would induce them to return to school (Johnson et al. 2009).

Studies on the direct effect of grant and scholarship aid on college completion also suggest that financial aid leads to increases in graduation rates. Assigning causality in such work is difficult, however, because students who apply for aid might be more motivated than others to earn a degree and because college prices and grant aid programs vary dramatically across colleges. In general, most studies find that grant aid for low-income students increases persistence rates by as much as 10 percentage points and completion rates by at least a few percentage points (Dynarski 2005; Deming and Dynarski 2009; Kuh et al. 2008).¹⁶ A rigorous study of Florida’s “Student Access Grant” found that students whose family income made them just barely eligible for the grant of \$1,300 were four percentage points more likely to earn a bachelor’s degree within seven years than students who were ineligible for the grant because their income was just above the required level (28% versus 24%; Castleman and Long 2013).

Using data from the National Center for Education Statistics “Beginning Postsecondary Survey,” we examined college completion rates among students in the United States who first entered college in 2003 and were followed through 2009.¹⁷ The data show that grant aid is associated with higher rates of baccalaureate completion, even after controlling for institutional characteristics and student characteristics such as high school grade point average and family income. And our analysis indicated that the effect of grant aid is fairly strong: Every standard deviation increase in grant aid is associated with a 6.7 percentage point increase in the likelihood of graduating within six years. Our findings are consistent with but slightly different from those of Franke (2014). Restricting his analysis to students first enrolling in four-year colleges, Franke found that the effect of grant aid depends on its source: For every \$1,000 in grant aid, federal aid (mostly Pell Grants) led to a 2.5 to 2.8 percent increase in degree attainment, state need-based aid led to a 2.4 to 2.6 percent increase, and institutional aid led to a 1.3 to 1.6 percent increase in degree attainment.¹⁸

A key consideration is whether the form of delivery of grant aid might lead to improvements in completion rates. It has been suggested, for example, that performance-based grants in which grant renewal depends on academic outcomes, such as grades and units completed, might be one way to improve college completion rates.¹⁹ However, studies have found only minimal if any effects of performance-based grants on student

¹⁶ “Persistence” measures whether a student returns for another year. “Completion” measures earning a degree (and also includes transfer to a four-year college for community college students).

¹⁷ See [Appendix A](#) for details of the sample and the methodological approach.

¹⁸ Franke used a propensity score matching approach in his study.

¹⁹ Performance-based grants are awarded to students after the term is completed.

completion beyond the effects of other types of grants.²⁰ The most rigorous of these evaluations, based on randomized controlled trials in seven states (including California), found mixed results (Patel et al. 2013). Among five states with findings related to persistence, the share of students registering at the beginning of the second year was slightly higher in only two of the states, including California (where persistence rates were 81.4 percent for program participants compared to 79.0 percent for the control group). In the six states with published findings on academic units (excluding California), the number of units earned in the first year increased slightly (but was not significant in two of the six states). Finally, in Ohio, the only state with several years of experience, completion rates (attainment of a vocational certificate, associate's degree, or bachelor's degree) increased by 3.5 percentage points (26.9% for program participants versus 23.4% for the control group), driven almost entirely by an increase in associate's degrees. These generally positive results are consistent with, and of the same order of magnitude as, the effects of general grant aid and scholarship programs. In other words, increases in grant aid improve student persistence and completion, but performance-based grants do not seem to have greater effects than other types of grants. These results are not necessarily surprising, as almost all grants already have de facto performance requirements. For example, the amount of most grants depends on full-time versus part-time status, with full-time students receiving more aid. Moreover, the renewal of grant aid often depends on some measure of academic progress (such as not being on academic probation). Finally, and most obviously, students cannot receive grant aid if they fail to enroll in college.

In addition to the direct effect on student persistence and completion, grant and scholarship aid can also indirectly improve student outcomes. For example, financial assistance enables students to work less and focus more on school. And to the extent that it allows students to attend college on a full-time rather than part-time basis, grant aid could reduce time to completion and increase completion rates. And finally, because the amount of grant aid offered is higher for full-time students, this form of assistance incentivizes full-time attendance.

A second and perhaps more important indirect role of grant aid is that it can induce students to attend four-year colleges rather than community colleges. Because of high net prices at four-year colleges, some low-income students in California opt for community colleges because of their low fees and low net prices. Costs of attending community college can be particularly low for students who live at home, with sticker prices about \$10,000 lower than for students with independent living arrangements. Among incoming freshmen at the state's community colleges in 2007–2008, 50,000 were deemed ready for college-level work.²¹ Some of these students would have been eligible for CSU or even UC but instead opted for a community college. The downside of this is that students attending a community college rather than a four-year college are less likely to complete college.²² Using data from over 2,000 students who were awarded scholarships by the College Access Foundation of California (CAFC) and who were followed for six years, we estimated the probability of earning a bachelor's degree based on the type of institution first attended.²³ The CAFC students all intended to earn a bachelor's degree, even if they first enrolled at a community college. However, as shown

²⁰ For example, Patel and Rudd (2012), in a randomized controlled trial of community college students in New York, found no effect of performance-based scholarships on units earned or academic achievement.

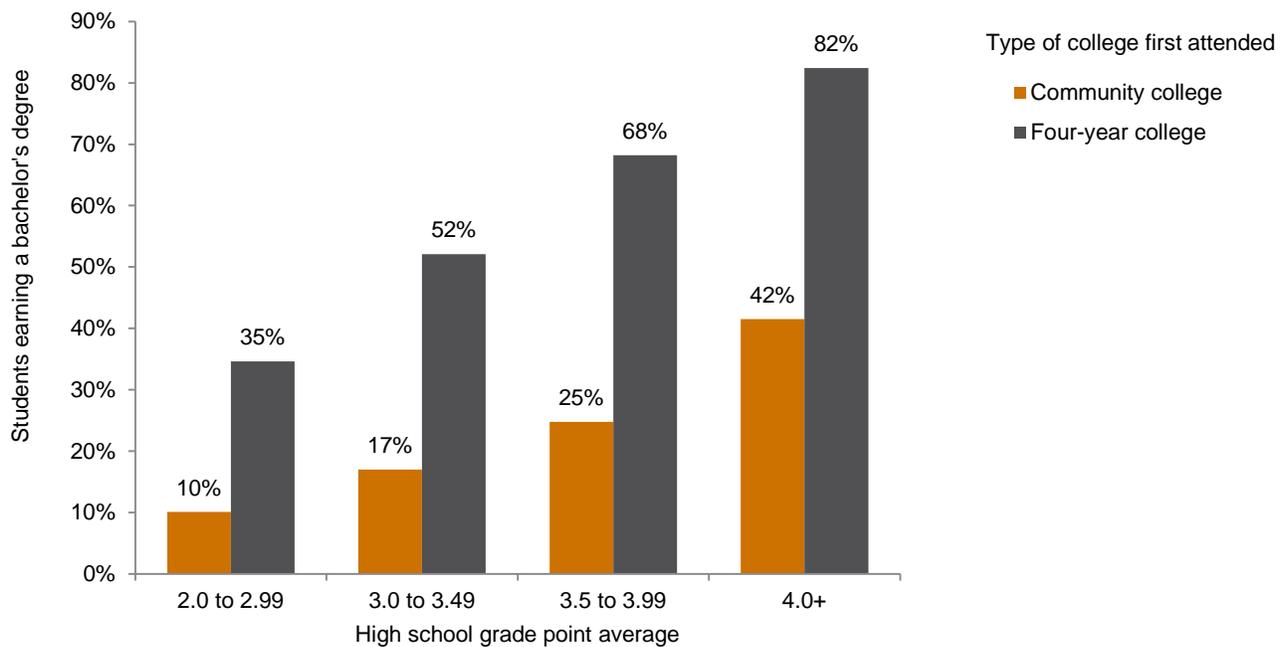
²¹ Based on author's analysis of California Community College Chancellor's Office data on college readiness of incoming freshmen.

²² Using an instrumental variables approach that is designed to control for unobservable selection effects, Long and Kurlaender (2008) find that students in Ohio who first enroll in community colleges are 14.5 percent less likely to earn a bachelor's degree than otherwise similar students who first enroll in non-selective four-year colleges. In a probit model with a full set of controls, the difference is 21.7 percent.

²³ See Appendix A for details.

in Figure 6, students who began their college career at a four-year college were much more likely than those who enrolled at a community college to earn a bachelor’s degree, even when controlling for high school grade point average. Because we cannot control for all the differences between students first attending a community college and those first attending a four-year college, it is likely that our results overstate the causal effect of attending a four-year college on earning a bachelor’s degree. But even if we were able to account for all the differences between community college and four-year college students, we would certainly find that enrolling in a four-year college leads to much higher rates of degree attainment than starting first at a community college and then trying to transfer.²⁴

FIGURE 6
Students from low-income families are much more likely to earn a bachelor’s degree if they first attend a four-year college



SOURCE: Author’s calculations based on logit regression models using CAFC student data. Students followed for six years.

NOTE: See [Appendix A](#) for details. Students can earn grade point averages above 4.0 for taking advanced courses.

²⁴ A study based on Ohio data, for example, found that methodological models like the one we used overstate the estimated effect of four-year colleges (versus community colleges) on degree completion by about one-third (Long and Kurlaender 2008). Our model estimates a 40 percentage point difference in the likelihood of earning a bachelor’s degree among students with grade point averages of 4.0 or higher (82% versus 42%); applying the Ohio findings to our data would suggest that the causal effect is closer to 27 percentage points.

Policy and Program Challenges

In this study, we examine the role of grant and scholarship aid in California in making college more accessible and in helping students complete college. Our primary findings are that:

- For many low-income students, college would probably not be possible without grant and scholarship aid, which has contributed greatly to keeping net prices from rising as fast as sticker prices.
- Grant and scholarship aid is associated with higher rates of baccalaureate completion. These findings hold even after controlling for institutional characteristics and student characteristics, including high school grade point average and family income.
- Performance-based grants do not seem to have greater effects than other types of grants, largely because students already must meet institutional academic requirements to remain enrolled in college.
- An important role of aid is that it can induce students to attend four-year colleges rather than community colleges. Students are much more likely to earn a degree if they first enroll at a four-year college.

Higher education costs are a big concern among Californians. A large majority believe that the lack of affordability in higher education is a big problem, and 70 percent believe that the high costs keep qualified and motivated students from attending college (Baldassare et al. 2011). The sticker price of attending college has risen sharply, largely as a result of dramatic increases in tuition. California's public universities have moved away from a low-cost model which, a dozen years ago, included some of the lowest tuition levels in the nation. In this context, grant and scholarship aid has become more important than ever in making college accessible and affordable. For many low-income students, college would probably not be possible without grant and scholarship aid, which has contributed greatly to keeping net prices from rising as fast as sticker prices.

As in many states, higher education is largely a public endeavor in California, which has proved fortunate for students from low-income families. California's public colleges and universities enroll the vast majority (85%) of low-income students in the state, with private non-profit colleges enrolling just 5 percent of low-income freshmen (while enrolling 40% of the state's high-income freshmen).²⁵ Private for-profit colleges (which were growing rapidly until recent grant restrictions) represent only a small share of the market. However, because state and federal grants and scholarships are available to students at many private colleges, the role of the public sector in grant aid extends beyond public colleges.

Because of public investments in higher education and because so many students attend public colleges, higher education officials and policymakers have a number of strategies they can use to help make college more affordable and accessible. While legislators in California have expressed a great deal of concern about the dramatic increases in tuition at state colleges and universities, it should be noted that those increases resulted directly from budgetary actions undertaken by the legislators.²⁶ Specifically, general fund

²⁵ Author's estimates based on IPEDS 2011–12 enrollment data on first-time, full-time freshmen receiving Title IV funds.

²⁶ During state budget crises, especially those associated with the decline in tax revenues during the Great Recession, California lawmakers passed budgets that disproportionately cut general funds to state colleges and universities. They explicitly increased community college fees to

allocations for direct operating support were severely curtailed, especially at UC and CSU, and recent increases in general fund support have been relatively small, compared to the size of the earlier cuts. Historically, general fund allocations have been one of the principal ways in which lawmakers make higher education affordable. In the past, the size of those allocations were sufficiently large to enable very low tuitions at UC and CSU and no tuition or fees at community colleges. But the era in which general fund allocations supported the vast majority of public university operating expenses appears to be over, as California moves toward a high-tuition/high-aid approach.

Recent efforts to improve higher education affordability should focus on low-income students because they are more dependent than higher-income students on financial aid. Although total grant aid through federal grants, Cal Grants, institutional aid, and private scholarships has risen, the costs of attending college still represents a formidable barrier for low-income students because the net prices at the colleges they are most likely to attend (community colleges and the California State University) have also risen. And even though net prices are far lower at public colleges and universities than private colleges, students from low-income families must expend a larger share of their family income than their more-affluent peers on a college education. One consequence of this is that many students will incur substantial debt as they take out loans to supplement their family's financial support and any grant aid they may receive. Another consequence is that the rising costs of attending college may seriously compromise the role of higher education in providing a ladder of upward economic mobility.

What should education officials and policymakers do to make college more affordable and accessible for low-income students? First, they should adopt policies that enable more students to gain access to the grant and scholarship aid for which they are eligible. Research shows that many students who qualify for grant aid do not apply, or do not complete financial aid forms. Especially important is the FAFSA. Recent research reported by Ed-Trust West, TICAS, and several other organizations suggests that many students who are eligible to receive Cal Grants do not receive them because they never fill out a FAFSA, do not complete the FAFSA on time, or do not submit their GPA verification form to the California Student Aid Commission.²⁷ Only 54 percent of California high school seniors filled out a FAFSA during the 2012–13 school year. Numerous programs exist that could lead to improvements in FAFSA completion. In Illinois, for example, the state's Student Assistance Commission provides information to high schools about which students have and have not completed a FAFSA form. High school officials then use this data to ensure that their college and financial aid counseling includes students who have not yet filled out the form. Moreover, there are significant barriers for students completing the aid application process that may disproportionately affect college access for low-income high school graduates. To qualify for Cal Grants and other types of grant aid, high school graduates must complete the FAFSA by March 2nd of their senior year and submit a GPA verification form to the California Student Aid Commission (CSAC). Currently, some schools in the state have begun to submit student's GPAs automatically to CSAC to help ensure that students who are eligible for Cal Grants are not hindered from receiving them by the bureaucratic process. The state legislature has acknowledged the effectiveness of this practice; and pending legislation, AB 2160 (Ting), would require high schools to automatically send electronic versions of student GPA verifications for all graduating seniors each academic year to CSAC in the interest of facilitating Cal Grant applications. In addition, verification would

help those institutions make up for lost state funding, and both CSU and UC responded as expected by increasing tuition and fees. See Johnson (2012) for a thorough discussion of this issue.

²⁷ See also Bettinger et al. (2012).

also be automatically required for all high school graduates at public schools from the prior academic year and all other Cal Grant A and B applicants, except those permitted to provide test scores in lieu of a grade point average.

Second, they should provide more grant aid to low-income students. The value of Pell Grants and Cal Grant B awards have deteriorated under the steady march of inflation.²⁸ Resetting the size of the grants so that they keep pace with inflation, and directing funds to those who most need them should be top priorities in student aid programs. Whether a student successfully completes college depends partly on the type of institution attended, and students who first enter a four-year college are more likely to earn a bachelor's degree. However, the Cal Grant program does not provide enough aid to incentivize students to choose high-cost four-year institutions over low-cost community colleges. For example, the Cal Grant B aid program, reserved for the lowest income students in the state, provides a stipend to help students cover some college costs (such as room and board) but does not provide tuition and fee awards until after the recipient has completed his or her first year of college.²⁹ This incentivizes the lowest income high school graduates to attend low-cost community colleges, even though they may be eligible to attend a public four-year university. PPIC has earlier argued that the share of high school graduates attending UC and CSU should be increased in light of improvements in college readiness and economic demand for highly educated workers. Providing the right incentives to attend four-year colleges could be achieved through improvements in grant programs.

Third, policymakers should consider whether certain institutions should not be eligible for state and federal grants. In California, the state has already deemed about 200 institutions to be ineligible for Cal Grants because of their low graduation rates and high student loan default rates. Federal policymakers should follow California's lead and implement similar restrictions for Pell Grants.

Finally, it is important to ensure that grant and scholarship aid does not exacerbate higher education cost inflation by putting more money into the system without assuring lower net prices. One way to accomplish this would be to require that colleges keep net prices below a certain amount for Cal Grant and Pell Grant recipients. Another option would be to offer students more grant aid if they attend colleges that have relatively low net prices within their sector (public, private non-profit, etc.). Such an approach would need to take into account differences in quality and graduation rates.

Higher education must ensure that it provides a ladder of opportunity and success for low-income students. A comprehensive set of policies for financial assistance, including grant and scholarship aid, can help ensure college affordability for all students who could benefit from college.

²⁸ Cal Grant B stipends were \$900 in 1969–70 (equal to about \$5,000 in 2012–13 dollars); in 2012–13, Cal Grant B awards were only \$1,473 (TICAS 2013). Cal Grant A awards are based on tuition, and thus have increased with tuition increases at UC and CSU.

²⁹ Cal Grant A awards cover tuition and fees, but not room and board or other education expenses. Some low-income students are eligible for both, but must choose between the two. Because those students are usually eligible for BOG waivers that cover their tuition and fees at community colleges, the only way they can receive funding for non-tuition expenses is to enroll in a community college and take the Cal Grant B award.

References

- Bettinger, E., B. Long, P. Oreopoulos, and L. Sanbonmatsu. 2012. "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment." *Quarterly Journal of Economics*, 127(3): 1205–1242.
- Baldassare, Mark, Dean Bonner, Sonja Petek, and Jui Shrestha. 2011. *PPIC Statewide Survey: Californians and Higher Education*. November. Available at www.ppic.org/main/publication.asp?i=999.
- Bohn, Sarah, Belinda Reyes, and Hans Johnson. 2013. *The Impact of Budget Cuts on California's Community Colleges*. San Francisco: Public Policy Institute of California. Available at www.ppic.org/main/publication.asp?i=1048.
- Castleman, B. L., and B. T. Long. 2013. "Looking Beyond Enrollment: The Causal Effect of Need-Based Grants on College Access, Persistence, and Graduation." NBER working paper 19306. Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org.
- Cornwell, C., D. Mustard and D. Sridhar. 2006. "The Enrollment Effects of Merit-Based Financial Aid: Evidence from Georgia's HOPE Scholarship," *Journal of Labor Economics* (Oct 2006).
- Deming, David and Susan Dynarski. 2009. "Into College, Out of Poverty? Policies to Increase the Postsecondary Attainment of the Poor." NBER Working Paper 15387. Cambridge, MA. National Bureau of Economic Research. Available at www.nber.org/papers/w15387.
- Dynarski, Susan. 2005. "Building the Stock of College-educated Labor." NBER Working Paper 11604. Cambridge, MA. National Bureau of Economic Research. Available at www.nber.org/papers/w11604.
- Franke, Ray. 2014. *Towards the Education Nation? Revisiting the Impact of Financial Aid, College Experience, and Institutional Context on Baccalaureate Degree Attainment for Low-Income Students*. Paper prepared for presentation at the Annual Meeting of the American Educational Research Association. Philadelphia, PA.
- Johnson, Hans. 2012. *Defunding Higher Education: What Are the Effects on College Enrollment?* San Francisco: Public Policy Institute of California. Available at www.ppic.org/main/publication.asp?i=988.
- Johnson, Jean, and Jon Rochkind, with Amber N. Ott and Samantha DuPont. 2009. *With Their Whole Lives Ahead of Them*. Public Agenda report. Available at www.publicagenda.org/files/theirwholelifesaheadofthem.pdf.
- Kahlenberg, Richard D. 2011. "A Way Out of the Merit-Aid Mess?" *Chronicle of Higher Education*. Available at <http://chronicle.com/blogs/innovations/a-way-out-of-the-merit-aid-mess/30633>.
- Kane, Thomas J. 2003. "A Quasi-Experimental Estimate of the Impact of Financial Aid on College-Going." NBER working paper 9703.
- Kuh, George D., Ty M. Cruce, Rick Shoup, Jillian Kinzie, and Robert M. Gonyea. 2008. "Unmasking the Effects of Student Engagement on First-Year College Grades and Persistence." *Journal of Higher Education* 79 (5): 540–563.
- Long, Bridget T., and Michal Kurlaender. 2008. "Do Community Colleges Provide a Viable Pathway to a Baccalaureate Degree?" NBER working paper 14367.
- Patel, R., and T. Rudd. 2012. *Can Scholarships Alone Help Students Succeed? Lessons from Two New York City Community Colleges*. New York: MDRC. Available at www.mdrc.org/can-scholarships-alone-help-students-succeed.
- Patel, Reshma, Lashawn Richburg-Hayes, Elijah de la Campa, and Timothy Rudd. 2013. "Performance-Based Scholarships: What Have We Learned?" Policy Brief. MDRC.
- TICAS (The Institute for College Access and Success). 2013. *Strengthening Cal Grants to Better Serve Today's Students*. Available at www.ticas.org/calgrants.vp.html.
- UCOP (University of California Office of the President) 2013. *Accountability Report 2013*. Available at <http://accountability.universityofcalifornia.edu/>.

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Pacific Life Insurance Company

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