The Effects of Financial Aid Expansion for Community College Adult Learners

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Abstract

Approximately one-third of U.S. undergraduates are 25 years or older, with even higher rates in community colleges, yet there are few studies examining how financial aid impacts outcomes for these older students. We study the 2021-22 expansion of California's Competitive Cal Grant program into the Cal Grant Community College Entitlement program, where previous caps on the number of awards were removed such that aid was offered to all applicants who enrolled in community college who met certain minimum criteria. We use a difference-in-differences design to estimate the impacts of this rapid expansion, comparing newly-eligible students, who would have scored below the criteria threshold in prior years, to unaffected higher-scoring applicants who would have been eligible even without the expansion. As a result of the expansion, state aid receipt increased by approximately 41 percentage points in the treated sample, with "crowd-in" effects that also increased federal grant and loan take-up rates. Focusing on intensive margin impacts for students who we observe enrolled in community college, we find that students attempted and completed more units in the year of the expansion, with larger effects that are drive by students who had not applied the prior year. Certificate and associate degree completion increased by 3 percentage points, with no impacts on transfer rates.

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1 Introduction

States play an increasingly large role in providing direct financial aid for college, with wide variability in how they allocate these grants (Gurantz 2025). The majority of state aid dollars are provided to traditionally-aged students who are completing high school, with students and families qualifying if they meet certain need-based or merit-based criteria. This paper examines the role of financial aid for a more understudied set of students – those who are generally older, legally classified as independent, or returning to college after some time off. There are fewer studies showing how financial aid impacts these students, relative to the many studies finding that aid improves postsecondary attainment outcomes for students transitioning out of high school (Nguyen, Kramer, and Evans 2019). This is an important gap in the literature given that one-third of U.S. undergraduates are 25 years or older, with even higher rates in community colleges.

We examine the effect of state aid eligibility provided to California community college students who are at least two years out of high school. California offers aid to older community college students through a program known as the Competitive Cal Grant program. This program historically capped the annual number of grants and allocated these awards via a point system based on factors such as GPA and financial need. In 2021-22, this program was replaced with the Cal Grant Community College Entitlement program, which was available to all California community college students who met certain minimum need and GPA-based eligibility criteria.

Two features of these aid programs make it especially valuable to study. First, unlike most financial aid programs studied in the literature, both the pre- and post-expansion programs target older students. Thus, our study sheds light on the impact of financial aid for a large but understudied group of students. Second, all students eligible for the Cal Grant receive tuition waivers through a separate aid program at the California community colleges, so that the entirety of Cal Grant can be used for living or other non-tuition expenses. Understanding the effects of aid for living expenses on student outcomes is especially important for community college students who face greater rates of financial hardship that might derail their postsecondary schooling (Baum and Terrones 2024).

We estimate causal impacts using a difference-in-differences design comparing newly eligible students, who would have scored below the point criteria threshold in prior years, to always-eligible applicants who would have been eligible even without the expansion. Importantly, the policy change was announced after many students had already submitted financial aid applications, suggesting the expansion would not have induced formerly ineligible students to apply for financial aid. We link individual-level applicant data from the California Student Aid Commission (CSAC), who administer the state aid program, to data from the

California Community Colleges Chancellor's Office (CCCCO) on enrollment, courses taken, course performance, and other measures of student behavior such as federal grant and loan take-up. We primarily focus on intensive-margin effects on enrollment and completion for enrolled students, in large part due to concerns about match rates between the two data sources. We discuss this complication, along with other data challenges, in the Data section.

We find that expanded eligibility led to a 3 percentage point increase in community college enrollment. Focusing on the "intensive margin" response among students who enroll in community college, the expansion increased receipt of Cal Grant aid by 41 percentage points, resulting in about a $784 increase in average Cal Grant aid in the first year (or about $1,900 for students induced to receive a Cal Grant). We also find a "crowd-in" effect on federal aid programs including the Pell Grant and student loans.

The additional aid resulting from the program expansion improved student outcomes. We find increases in units attempted and earned among newly-eligible students in the first year after the expansion. These increases are driven by a shift away from enrolling less than half-time (i.e., less than 6 units per semester) to full-time enrollment. We also find a 3 percentage point increase in the likelihood of earning a certificate or associate degree, with a 1 percentage point and statistically insignificant positive impact in transfer rates. Finally, heterogeneous impacts show that results appear driven by "new" students who had not applied the prior year, with no differences based on having children (who are eligible for more state aid) or those with more postsecondary experience.

2 Literature Review

Educational debt and default rates have increased significantly over the last few decades, raising questions around what incentives will help individuals pursue and complete their postsecondary degree (Looney and Yannelis 2015). One way to defray costs is through targeted grant aid programs, that place more resources in the hands of individuals who would be most likely to forgo college due to actual or perceived costs. First-degree price discrimination can have theoretically beneficial properties if aid is distributed towards those with highest need, though ultimately depends on how these programs are instituted and what types of behavioral responses they induce among potential attendees (Fillmore 2023; Herd and Moynihan 2018).

A long literature shows that grant aid increases postsecondary enrollment and completion rates, as well as improves post-college outcomes such as wages (Nguyen, Kramer, and Evans 2019; Bettinger et al. 2019; Scott-Clayton 2017; Page and Scott-Clayton 2016). This is not uniformly the case, as whether aid is effective

depends significantly on the context of how it is provided. For instance, allocating aid to students via "merit" - where eligibility is typically determined by some measure of academic preparation such as grades or standardized exam scores - produces weaker effects, on average, than when aid is allocated by measures of financial need (Gurantz and Odle 2022; Nguyen, Kramer, and Evans 2019). Importantly for this study, most of the prior research on the impacts of financial aid has focused on what are often referred to as "traditional" students, or those who recently graduated from high school and are considering an immediate transition into college.

Due to increases in postsecondary enrollment over time, the U.S. has seen a large increase in older students, students who have "some college but no degree", or those who dropped out before earning any type of postsecondary credential. These noncompleters struggle the most with student loan debt, and how to best induce them to return to college and earn a degree, including by offering financial aid, remains an open question (Looney and Yannelis 2015). For younger students, grant aid can increase educational attainment not just by lowering the cost of attendance, but by reducing the perceived risks associated with undertaking a new venture. Students with less college knowledge or social capital may be more uncertain about whether they "fit" in the college environment, and use grant aid as an opportunity to experiment with college enrollment (Stange 2012). Some of these concerns may be less relevant for older students, thus weakening the ability to use financial aid as a policy tool. Most older students have already attended college and left, so have more information on what college entails and their social or academic fit, relative to students who have not yet attended. Young adults may also have heightened responsibilities, such as a mortgage or dependents, and the typical aid package may be insufficient to cover for these demands, especially when they cannot live in dormitories or take advantage of other ways colleges can subsidize younger students.

The existing research tends to find that offering aid to older students produces smaller impacts than when offered to recent high school graduates. For instance, a national study of the Pell Grant found weaker effects for independent students than dependent students (Eng and Matsudaira 2021). A series of projects that offered financial and other incentives to enrolled community college students often found positive impacts on units enrolled and completed in the short-term but statistically insignificant effects on longer-term impacts such as degree attainment (Mayer, Patel, and Gutierrez 2015; Barrow et al. 2014). One potential finding is that aid eligibility for older students can shorten time-to-degree, even if overall completion rates are unchanged (Denning 2018; Mabel 2020; Mayer, Patel, and Gutierrez 2015). Probably the strongest results that aid improves postsecondary outcomes for older students have been found among military veterans, who likely differ in a number of ways from the majority of older students looking to continue their education (Barr 2019).

California's Competitive Award program, which was the program expanded in this study, was previously examined using a regression discontinuity design by Gurantz (2022), focusing on cohorts from 2002 through 2011. Gurantz (2022) found null effects on community college enrollment, completion, or earnings outcomes as measured in unemployment insurance data, for students who were marginally eligible for the program.[1]

Our study builds on and is distinct from this earlier analysis in several ways. First, this paper uses community college transcript data to look at a richer set of outcomes than was possible in Gurantz 2022, which relied on National Student Clearinghouse data that simply identified whether or not a student enrolled in a particular college. Second, Gurantz 2022 used a regression discontinuity design that isolates the effects for students with point totals close to the aid eligibility threshold. In contrast, our estimates, based on a difference-in-differences design, include a wider population of students across the eligibility spectrum. As we describe in greater detail below, the expansion increased aid to students who, on average, have lower GPAs but less financial need relative to the students who score near the eligibility threshold. That being said, these are all low-income families, with applicants' average income of just $22,000. Third, we cannot directly compare the studies as the scoring system in Gurantz (2022) was on a 200-point scoring system that CSAC later changed to a related but different 1000-point scoring system. The new point system further increased the emphasis on measures of financial or other disadvantage as key to earning the award. Finally, the prior study also relied on the 2002 through 2011 cohorts, whereas students in 2021 face increased tuition and housing costs, as well as a different economic and social environment (including the COVID-19 pandemic), that might change the benefits of financial aid for older students.

3 Policy Background

3.1 Overview of California's state aid program

Prior to 2021-22, students who were two or more years out of high school could apply for what was known as the Competitive Cal Grant program.[2] Students who applied by September 2nd were entered into a pool that would determine whether they would receive financial aid to attend community college.[3] Under this program, a fixed number of awards were offered to students who met minimum GPA and financial need thresholds. As the number of applicants meeting these criteria exceeded the available awards, awards were allocated to students scoring highest on the Competitive point system. Specifically, applicants were assigned points based on a number of factors related to financial need and academic promise (these factors are described in detail below). CSAC then offered awards to those with the highest point totals until the

number of awards was exhausted. Gurantz (2022) found that during the years when the Competitive Cal Grant was in use, about 15 percent of applicants had point totals that were above the de facto point threshold that determined who received awards. Importantly, the announcement of receiving an award did not occur until a few weeks after the September 2nd application deadline, typically in early October.

The passage of Assembly Bill 132 replaced the Competitive program for community college students with the Cal Grant Community College Entitlement Program. The new program eliminated the cap on the number of awards and the Competitive scoring system. Instead, all students who met the basic eligibility criteria were offered an award. These criteria were a 2.0 GPA and having income and assets below thresholds that vary by family size.[4] In practice, this reform expanded awards to students who met the basic eligibility criteria but whose point totals under the old system would have been below the level required to receive a Competitive award. Of course a key change is that in years prior to the expansion, students would have already made the decision to enroll in college or not before without any guarantee of being offered financial aid. Under the new policy, students would be making decisions about college enrollment or course selection with the knowledge they would be receiving additional financial support in the future.

To apply for both the pre- and post-expansion programs, students had to submit a Free Application for Federal Student Aid (FAFSA) or California Dream Act Application (CADAA), along with a one-page GPA verification form. For community college students the Cal Grant provides a $1,648 "subsistence award", though students can receive a pro-rated amount based on their enrollment intensity (i.e., students who attend one-half time receive one-half of the amount, or $824). Because students who meet the Cal Grant income-eligibility criteria are very likely to receive tuition waivers via other state aid programs, now known as the California College Promise Grant, the entirety of the Cal Grant aid can be used to non-tuition benefits such as textbooks or living expenses. Cal Grant recipients in California community colleges are also eligible to receive additional aid under the Student Success Completion Grant (SSCG), which provides supplemental aid to students who enroll in more than 12 units.[5] Students who have dependent children are also eligible for up to $6,000 per year.[6]

3.2 Competitive award scoring system

As we explain in our Methods section below, our research design requires determining which students in the post-expansion period would have been had enough points to receive awards under the pre-expansion competitive award regime. In the years just prior to the expansion, CSAC assigned each individual a score of up to 1000 points based on characteristics included in their application[7]. Students earned up to 100 points via their most recent GPA; college GPA was used if they had previously attempted at least 24 college units,

but otherwise CSAC used high school GPA.[8] CSAC has entered into data sharing agreements such that in recent years most GPAs from public high schools or colleges are automatically transferred into their data system, and often do not require additional application steps on the part of the student.

The remaining 900 points, or the majority of the point total determination, derives from various measures of disadvantage, with up to 250 points based on Expected Family Contribution (EFC; calculated by the U.S. Department of Education) and 250 points based on a combination of income and household size (e.g., those with lower income and larger households receive more points). The final 400 points come from four categories of up to 100 points each, based on: (1) having parents with lower levels of formal education; (2) being financially independent and single with dependents; (3) being an independent students who was considered an unaccompanied youth, at risk of homelessness, or having been in foster care or an orphan or ward of the course and; (4) an "access equalizer" that provides more points for students who were more years out of high school, reported a lower level of college education on the FAFSA, or graduated from a "disadvantaged" high school as defined by higher levels of free and reduced price lunch participation or lower levels of college attendance. For students applying from March 3 through September 2, the cutoff for eligibility was 607 in 2019 and 594 points in 2020, which are the two years immediately preceding the expansion.

4 Data

We rely on data from two agencies: the California Student Aid Commission (CSAC), who administer the state's financial aid programs, and the California Community Colleges Chancellor's Office (CCCCO), which includes financial aid receipt and transcript data on community college enrollment.

4.1 CSAC Data

CSAC data includes information on all California students who submit the FAFSA, which is required for state financial aid programs as well as for federal financial aid, and the CADAA, which only allows students to be considered for state programs.[9] The FAFSA/CADAA records contain detailed information about a student's financial resources for college including dependency status, age, gender, family income, and other student and family background variables. CSAC also has information from separate applications students submit for the Cal Grant; the most important variables for this analysis are the GPA and whether this was a high school or college GPA.

In addition to information from financial aid applications, the CSAC data also include information on

state aid payments made to students - the award types, amount of the awards, and the higher education institution to which the payments were sent. Finally, CSAC has data on whether an applicant was enrolled in the fall term of a given academic year and, if so, at what institution.[10]

4.2 California Community Colleges Chancellor's Office (CCCCO) Data

Data from the CCCCO include information on California Community College (CCC) student characteristics and enrollment such as age, gender, ethnicity, educational goal, enrollment status, units earned and attempted, and GPA. Financial aid award data includes the award type, amount of aid received, EFC, dependency status, adjusted gross income and identifiers for student, college and term. Student degree and transfer variables include degree award type, program of award earned, transfer institution, four-year institution type and date of transfer date.

4.3 Data Construction

Our analytic sample consists of three years of California residents who submitted financial aid applications for the 2019-20 through 2021-22 school year and who meet the basic eligibility requirements for either the Competitive Cal Grant program or the Cal Grant Community College Entitlement program.[11] We then merge this sample of aid applicants to CCCCO data on community college participation and academic performance.

4.3.1 Competitive Award Point Totals

Our research design requires us to identify applicants who only became eligible during the expansion – those who would have had lower point totals prior to the expansion but were offered awards once it became an Entitlement program and no longer rationed awards on the basis of points. One complication is that CSAC did not calculate point totals after the expansion because they were no longer needed. To account for this, we calculate the points applicants would receive according to CSAC's pre-expansion scoring formula using the information contained on the financial aid applications.[12] This strategy allows us to determine which students were "treated" by the expansion - those who would have had points that were too low to receive awards in the pre-expansion period and become eligible for the award once the program became an entitlement.

4.3.2 Sample Restrictions

We make several important sample restrictions to focus on students for whom the expansion would have affected aid eligibility, which helps us isolate the effect of the expansion. We drop applicants if their calculated points were below 200, as this was the minimum point total in pre-expansion years and no students with calculated points below 200 receive awards.[13]. To focus on students who would have been at least two years out of high school and eligible for the Cal Grant programs we study here, we restrict the sample to students who were at least 21 years old when they applied for aid (we do not observe high school graduation date).

We also restrict the sample to students who submitted applications after April 2nd and before September 2nd. These students were only eligible to use any Cal Grant aid at community colleges, and this restriction simplifies the analysis by allowing us to focus on community college outcomes. In most years, students who apply after March 2nd are only eligible to use the Cal Grant at community colleges. However, we use the April instead of the March cutoff date because, for the 2021 application cycle, CSAC permitted applications for its main grant programs (that can be used at four-year colleges) through April 2nd due to the COVID-19 pandemic. Thus, cross-year comparisons based on applications submitted in March 2019 or 2020 compared to those in 2021 are therefore likely to be confounded by differences in the composition of students submitting applications. As a robustness check, we also discuss results focusing only on earlier and later months.

Our final restriction relates to the year-to-year variation in the point threshold used to award grants in the pre-expansion period. This cutoff was 607 points in 2019-20 and 594 points in 2020-21. For 2021-22, no such cutoff exists since points were not used to allocate awards in that year. As we explain in the next section, our empirical approach requires the "eligible" and "ineligible" point groups to be comparable across years, and we therefore form these groups using a fixed point cutoff across years. A complication of doing so is that eligibility status for students whose scores fall in the intermediate 597-607 range would be misclassified in one of the years. To avoid this, we "donut hole," or remove students in this range from all three years. This ensures that in each year we have a "control" group of students scoring above 607 who were always eligible, whereas our "treatment" group of students scoring below 594 would not have been eligible in the two pre-period years but become newly eligible in the expansion year.[14]

4.3.3 Description of matched CSAC and CCCCO data

Our main analysis sample consists of 66,916 students who were enrolled in community college in the fall term for which they applied. Summary statistics for this sample are reported in the first two columns of Table 1. Average family income in this sample is quite low, at almost $17,890, though as expected the variability is quite large with a standard deviation of a little under $15,000. Only 22% of students are dependents and the average age is 27 years old. As all students are required to submit a GPA as part of the Cal Grant application, the average is 2.93.Each student has a calculated point total between 200 and 1000, and the average points in 508, which is less than the pre-expansion cutoff used to determine which applicants would receive Cal Grant aid.

One concern with restricting to students who enrolled in community college is that eligibility for Cal Grant aid could affect community college enrollment, generating a sample selection problem. Indeed, we later show that the expansion of aid offers does appear to increase community college enrollment rates by approximately three percentage points. However, we make this restriction because it appears that the fuzzy matching procedure used to link CSAC and community college records (based on name and date of birth) undercounts actual community college enrollment. This undercount makes it difficult to create accurate measures of key outcomes such as units taken and degree attainment without restricting the sample to students who enrolled in community college. Reassuringly, we show that our key findings are robust to including students who do not enroll in community college (including students who we did not match to the community college data) and assigning them values of zero for the outcomes.[15]

Columns 3 and 4 of Table 1 depict characteristics of students who appear to be enrolled in the CCC system but who we could not match to the CCCCO data.[16] In comparison to the students in our analytic sample, the unmatched students are fairly similar along a number of key dimensions, such as EFC (e.g., $1,037 in our sample compared to $910 in the missing group) and GPA (2.90 compared to 2.93). The biggest difference between the two groups is dependency status, with 22% of matched students recorded as dependents but only 4% of unmatched students; matched students are correspondingly younger at 27 years old compared to 32.7 years old in the unmatched sample. This pattern is consistent with name changes (e.g., after marriage) being one reason we might fail to match significant numbers of community college enrollees.

Finally, Columns (5) and (6) of Table 1 describe the relatively small percentage of students who applied for the award but did not enroll in college; these students are not part of our analytical sample but shown for completeness. They appear to be generally similar to our analytical sample, though likely did not enroll in college for reasons not typically captured in administrative data.

5 Methods

We use a difference-in-differences (DD) research design, with our "treatment" group consisting of lower-scoring students who became eligible when the state expanded the program in 2021, compared to higher-scoring "control" students who were eligible for the program both before and after the expansion. To understand the variation underlying our approach, Figure 1 shows the percentage of students receiving a Cal Grant award in on our analytic sample. As can be observed, those above the 594 point cutoff remain unaffected by the policy change, with over 40% receiving a state aid payment to attending community college in the Fall term. There are many reasons students might not receive a state aid payment, including: they withdrew early in the academic term before they could be paid or they attended less than half-time and are ineligible for state aid as a result. In addition, we are required to recreate the estimated point totals in our sample, and so our analytic sample likely contains a very small number of individuals who were ineligible for the program but we were not able to correctly identify due to data limitations.

The group that gained eligibility experienced a large increase in receiving a state aid payment. Before the expansion policy, essentially no students received a state aid payment. After the policy change this increased by roughly 37 percentage points.

Figure 1 motivates our analytic strategy, which we implement by estimating the equation below:

$$Y_{it} = \beta_0 + \beta_1 \mathbf{D}_{it} + \theta_t + \mu \mathbf{1}\left(p(it) < 594\right) + \pi X_{it} + \epsilon_{it} \tag{1}$$

Our outcome of interest is Y_{it}, such as credits attempted and earned, for individual *i* who applies for aid in year *t*. We include year (θ_t) fixed effects and a dummy for whether student i's point total ($p(it)$) is below 594. We define our treatment D_{it} as equal to one for students with points below 594 who applied in 2021 (i.e., the interaction between an indicator for points below 594 and an indicator for $t = 2021$). X_i is a vector of student-level covariates. By including time fixed effects and a dummy for scoring below the pre-period eligibility threshold, β_1 captures the change in Y_{it} for the treatment group before and after the expansion relative to the change for the control group, controlling for student observable characteristics. We also estimate specifications where we include an interaction between an indicator for points below 594 and an indicator for $t = 2020$. The coefficient on this term sheds light on whether there are differential changes between treatment and control groups prior to the expansion, and can be thought of as shedding light on the validity of the "parallel trends" assumption necessary for a difference-in-differences design to deliver causal effects.

The main threat to our empirical strategy is that there may be omitted variables that change after after

the 2021 expansion differentially between the treatment and control groups. To investigate this possibility, we estimate Equation (1) using various student characteristics as the dependent variable to check whether observable student characteristics changed differentially. Table 2 reveals income and EFC increased in the treatment group in 2021 relative to 2019. Yet we also note some statistically significant changes in 2020 relative to 2019, such as a decrease in income and an increase in EFC, suggesting that year-to-year variation in applicants is likely to occur, especially as community colleges transitioned through the COVID-19 pandemic. We also find some applicant characteristics unchanged across years, such as submitted GPA or whether applicants had earned a degree prior to applying. Due to these fluctuations, our model includes a vector of observable characteristics X_i to account for year-to-year fluctuations in the applicant sample, but we show in later analysis that results are identical when these are excluded. We report robust standard errors throughout; we obtain similar results if we use standard errors adjusted for clustering on dimensions such as point totals or college attended.

6 Results

6.1 Impacts on community college enrollment

We first examine whether the offer of aid impacted whether students chose to enroll in a community college. Table 3 uses the full analytical sample—before we restrict to only students in the matched CSAC-CCCCO data—and finds that enrollment did increase by three percentage points, over a baseline of approximately 94%.[17] These results suggest that increasing the certainty that they were going to receive state aid convinced some students to enroll in college, or alternately prevented them from withdrawing early in the academic term. Nonetheless, almost all students in the sample enroll in a community college. Although we continue to focus on our matched sample, we discuss the potential implications of this impact on enrollment below.

6.2 Impacts on financial aid receipt

Table 4 shows that, among the students who were enrolled in community college, the expansion of the aid program increased not just state aid receipt, but other forms of financial aid as well. We find that students in 2021 who would have been previously ineligible for aid have a 41 percentage point increase in Cal Grant receipt, relative to students in 2019, with average aid increasing by $784 in the subsequent academic year. Of the $784, roughly $536 came directly from the new Cal Grant B, with $248 coming from other forms of state aid that can complement this grant such as parent supplements or SSCG that gives extra grant aid to

those enrolled in higher units (see Section 3.1 above). Scaling the increase in aid due to the expansion by the increase in Cal Grant receipt shows that the average new recipient received about $1,900. We also note that there is no difference in state aid receipt when comparing 2020 to 2019; observing no change between 2019 and 2020 helps confirm the validity of our empirical strategy, as we would not expect any changes to occur prior to the expansion.[18]

The right-hand columns of Table 4 uses CCCCO data and shows that state aid participation has positive spillover effects on other forms of aid. For example, impacted students are five percentage points more likely to receive a Pell Grant, with the reduced form impact on Pell aid at $182. Although speculative, this may be due to increasing the intensity of college enrollment (e.g., moving students into part-time enrollment and becoming Pell Grant eligible, or into full-time enrollment and increasing the amount of aid received, which we show below) or by encouraging students to follow through on subsequent steps in the aid application process, such as FAFSA verification. Students are also approximately one percentage point more likely to receive the California College Promise Grant, which provides free community college tuition, and to take out federal loans. The monetary value of these increases is relatively small, at $38 and $51 for state tuition waivers and federal loan take-up, respectively. It is also worth noting that virtually all students in our sample receive community college tuition fee waivers, and these students can use their other financial aid to cover living expenses.

6.3 Impacts on intensity of first year community college enrollment

Table 5 shows the "intent-to-treat" impacts of the aid offer on student outcomes. Although we we focus on these ITT estimates, the expansion increased aid receipt by about one-third so the effects of actually receiving aid would be close to three times as large as these estimates. We find that the offer of aid increased academic intensity, specifically by increasing units attempted in the Fall by 0.33, or a little over 4% over a baseline of 8.6 units. The number of units attempted is closely matched by a 0.28 increase in units completed over a baseline of 6.4, which again is a roughly 4% increase. This suggests that approximately 80% of new units attempted are completed, which is a strong pass rate in community college courses and higher than the baseline rate of 75% (i.e., 6.4 divided by 8.5). This is confirmed by the null results on any change in GPA during the Fall term, suggesting equal performance even though students are taking on a heavier courseload.

We track students into the Spring of the first year and find no statistically significant impacts on persistence but continued positive impacts on units taken, which increased by 0.27. (Students in our sample who did not enroll are coded as zero units.) Even though units attempted increases there is only a statistically insignificant 0.13 increase in units earned, suggesting an approximately 50% pass rate; this is matched

by a negative and statistically significant decline in GPA during the Spring term of -0.06, though this is a relatively small difference from the baseline of 2.86.

The Cal Grant aid can only be received by students enrolling at least part-time (i.e., six or more units), so we disaggregate units taken and earned in the Fall into categories for below 6 units (less than part-time), 6 to 11 units (part-time), 12 to 14 units (full-time), or 15 or more units. We include this last category as California offers additional financial incentives via the Student Success Completion Grant for students who take 15 or more units.

Table 6 confirms that the offer of aid decreases Fall enrollment in fewer than 6 units by four percentage points, or a 15% decline over a baseline of 26%. In exchange we see increases in the likelihood of taking part-time or full-time course loads, with a statistically significant increase of 2 percentage points in the number of students taking 12 to 14 units, and insignificant 1 percentage point increases in taking 6 to 11 units or 15 or more units. We see similar patterns when looking at units earned.

Above we observed smaller impacts on units attempted in the Spring, and the bottom half of Table 6 matches these results, with a statistically significant 2 percentage point decline in students taking less than 6 units, and a 1 percentage point increase in students taking 12 to 14 units or earning 15 or more units. Overall these results show that the offer of aid increases credit accumulation in the first year of eligibility.

6.4 Longer-run impacts on enrollment and completion outcomes

Table 7 shows longer-run impacts of the 2021 aid expansion into the second and third year after students were initially offered the award. We first observe that most of the increase in aid towards students occurs in the first year of the program. After the first year we see that treated students have approximately $784 additional Cal Grant aid (Table 4), and this only increases to $958 by year three. This relatively small gain is likely as many community college students exit over this time frame – either through earning a degree or choosing to stop enrollment – and as control students can obtain aid in subsequent years.

Cumulative units attempted and earned were both positive at 0.77 and 0.66, respectively, though neither estimate was statistically significant as the underlying variability increases significantly. These percent increases of approximately 2.5% to 3% are also smaller compared to changes in units attempted and earned in the first year of enrollment. Yet we also find that the likelihood of getting any type of certificate or associate degree increased by three percentage points, over a baseline of 36%. Thus the additional aid is increasing student success within the community college, at least after three years of potential enrollment. We find a statistically insignificant 1 percentage point increase in transfer rates, which is suggestive that the increase in degrees does not lead students to be less likely to transfer to a four-year university.

6.5 Robustness Checks

We recognize that our methodology introduces some challenges to interpretation, given the sample construction, year-to-year variation in student characteristics and the application deadline, and the expansion inducing an increase in community college enrollment. We first engage in a number of robustness checks, where we re-estimate outcomes but without the inclusion of controls (Table 8, Panel A) and one in which we re-introduce the omitted "donut hole" sample between 594 and 607, assigning them to the control group even though some students would have received aid in one pre-period year (Table 8, Panel B). Both choices do not substantially change our results, and in the first case even leads to positive and statistically significant impacts on persistence and units earned by year three. As another check, we vary the months used in the analysis, given that in expansion year CSAC used an April 2nd application deadline, relative to the typical March 2nd deadline. When we focus only on students who applied in May or later, who are less likely to be affected by the fluctuating application deadline, we find results that are slightly smaller but follow the same general pattern (Table 8, Panel C).

A second test is to use the entire sample of applicants, rather than only focusing on those who appear enrolled in the community college data. This addresses the potential sample selection bias that could be caused by conditioning the sample on community college enrollees. However, it does so at the cost of introducing a substantial number of "zeros" as outcomes for students who likely were enrolled but not able to be matched to the community college data. We find no substantial changes, with the only real difference being some evidence that Fall to Spring persistence increased, likely due to the higher number of Fall enrollees.

6.6 Heterogeneity

We present two separate sets of results based on heterogeneous applicant characteristics. The first set of analyses focuses on applicants who do or do not have children, based on not just the challenges that face adult learners with dependents, but also that applicants with dependents are eligible for an increased state aid award of $6,000. This contrast is shown in the Table 9, Panels A and B. Applicants with children who become newly eligible for the award receive more state aid, showing an increase of $1,627, relative to applicants with no children whose aid increases by $546. Here we find a large difference in completion rates, with applicants with children having larger positive four percentage point impacts on certificate or associate degree completion and on transfer rates to four-year colleges. For those without children, we continue to find positive impacts on degree completion, though suggestive but insiginificant negative impacts on transfer

rates.

Given that applicants can apply in multiple years, Table 9 compares outcomes for students who did or did not have evidence of applying multiple times over the years of our data. We find much larger effects for new applicants (Panel C), who earn an additional 1.6 units over three years and are 5 percentage points more likely to earn a degree. These results are statistically significant, even though we observe no changes between 2020 and 2019, which provides additional confirmatory evidence that these results are driven by the increased aid. In contrast, repeat applicants show no evidence of effects on any outcome measure, even though they received an average of $598. Once again this provides some evidence that the guaranteed offer of aid may be more valuable to those less connected to the higher education system and are interested in returning.

Table 10 presents a separate set of results based on prior college experience, which shows that the aid favors students with less prior experience. When we differentiate by prior units earned, we find larger increases of 1.2 units earned over the next the years for those who started with fewer than 60 units, compared to an insignificant 0.2 units earned increase for those who started with more than 60 units. Nonetheless, the increase in completion rates is similar between these two groups. Panels C and D compares results for those who applied with any prior record of having earned any community college certificate or degree, finding larger completion effects of four percentage points for those who had not earned any degree prior. We also note that only 9% of the sample had previously earned a degree, so we take these results as suggestive rather than definitive.

7 Discussion

This paper examines a large expansion of a state grant aid program that supports students who enroll in community college. In this study, the students impacted by the policy are those who would have had application ”point totals” below what was previously required, indicating generally lower GPA and higher income relative to other applicants. Nonetheless, the average applicant in our sample had income of approximately $17,890 with an average GPA just above 2.9, indicating both high levels of financial need and a prior level of academic performance that could allow for successful completion of a postsecondary credential. We also note the California context, where most applicants are receiving a tuition waiver such that the grant aid offer could be used for alternative expenses, such as living costs. The direct grant offer was approximately $1,600 cash for a student taking a full-time, though students who are parents or willing to take even more units could receive even more state funding from alternate sources.

Our difference-in-differences design shows an increase in aid receipt of approximately 41 percentage points. One reason take-up is relatively low is that many students ultimately take fewer than six units of coursework (26% and 47% of students in the Fall and Spring, respectively), and are thus ineligible for the state aid. Nonetheless, we find that in the first year the units attempted increased by 0.60 and units completed increased by 0.41. In an instrumental variable framework based on grant aid take-up, this suggests a 1.5 and 1.0 unit increase in attempted and completed credits resulting from actually receiving the grant aid. Tracking students over three years, we find that gaining eligibility for the aid due to the expansion leads to a 3 percentage point (8%) increase in earning some type of certificate or associate degrees, with no impacts on transfer rates. Thus the students impacted by this policy may be those more interested in short-run credentials than in the more traditional transfer function towards a four-year degree. Given that students receive on average $958 of aid over three years, all the numbers presented are close approximations to the often used metric of the impacts of an additional $1,000 of financial aid.

There are a few limitations in our design. First, we cannot observe many students who are likely enrolled in the community college due to fuzziness in our matching process. We do not feel that this substantially impacts our results, as there are small differences in the observable characteristics of the likely enrolled students we do not observe. Moreover, we find similar effects for short-run unit accumulation when we include students who are not matched and assign them values of zero for units. However, this concern may affect the external validity of the study, given our sample is relatively more weighted towards slightly younger, dependent students (that said, 80% of students in our sample are independents). Another issue is that the offer of the award likely impacted enrollment, and conditioning on the enrolled sample may lead to some bias in our estimated impacts. When considering how this selection might affect our results, it is possible the type of student induced by the offer to take courses is likely one that would be taking fewer courses without being enrolled, and thus our estimates may understate the effect of the aid expansion. Alternative results that include all missing students as zeros finds that results are unchanged.

We believe that the expansion of this program provides additional evidence that providing students and families certainty when offering financial aid remains a key consideration in the design of financial aid programs (Burland et al. 2024). Prior work studying the pre-expansion version of this program found relatively little impacts on enrollment or completion rates (Gurantz 2022). The former Competitive award program functioned quite similarly to the Pell Grant, where a challenging application formula did not give applicants clarity as to whether they would actually receive the money. One big difference is that the Pell Grant provides this information prior to enrollment, whereas the Competitive award program did not calculate eligibility until after students were enrolled. By giving students advance notice that they would be receiving

the aid, the new program appears to have given more confidence to applicants that they would recipients of the aid, thus encouraging a stronger enrollment response and helping students persist to graduation.

Notes

[1]The only observed impact from the program was a sizable increase in for-profit degree completion. However, most of the for-profit colleges in the program became ineligible for the Cal Grant aid starting in 2012.

[2]Graduating seniors or students one year removed from high school are eligible to apply for the Cal Grant High School Entitlement program. All students who meet the financial need and GPA eligiblity criteria can receive aid from the Entitlement program. Bettinger et al. (2019) examines the effects of the Entitlement program on long-term student outcomes.

[3]Students who apply before March 2 can use the Cal Grant award at four-year colleges but the 2021 expansion only applied to community college students. As we discuss below, our sample only uses students who applied after the March 2 deadline so that students would only be eligible for a Cal Grant to attend community college. Applicants more than two years out of high school interested in attending a four-year college are still subject to the historical Competitive Cal Grant process that relies on point totals.

[4]In the year of the expansion, exact income limits for dependents and independents with their own dependents ranged from $46,300 for a family of two up to $70,100 for a family of six or more. For independents without dependents, married couples needed income below $46,300 and single individuals $40,500. The asset limits were $50,000 for independent students and $105,200 for dependent students.

[5]During the study period, students could earn up to an additional $4,000 per year by enrolling in 15 units per semester.

[6]See https://www.csac.ca.gov/students-dependents for details.

[7]See details for scoring mechanism in https://www.csac.ca.gov/post/competitive-scoring-matrix.

[8]Having a reported of GPA of 2.0 or above is a requirement of completing the application, and students who did not report a GPA were ineligible

[9]Our sample also includes undocumented students who submit the California Dream Act Application, which contains similar data to the FAFSA and allows undocumented students to receive state aid or take out student loans. Although these students are included in our sample we cannot identify who they are, and undocumented students are estimated to comprise fewer than 5% of California's community college enrollment.

[10]These data are provided to CSAC by individual community colleges early in the Fall semester for enrollment verification purposes, though the specific date of transfer varies across community colleges.

[11]Specifically, we limit the sample to students who meet the income and asset thresholds, have at least a 2.0 GPA, and submit their applications by the relevant deadlines.

[12]To ensure consistency across years, we use point totals we calculate even for years when the actual points used by CSAC are available. In rare cases, our calculated point totals differ from the true point totals from prior years. This is because our data derive from snapshots taken by CSAC towards the end of each academic year, and thus may have different values than they did at the time CSAC calculated point totals. Nonetheless, we verified that our calculated point totals in 2020 matched CSAC's point totals used for award assignment 99% of the time.

[13]Although this is 25 percent of the observed data, these are mostly students with missing data that prevents them from earning a sufficient number of points and would not have been relevant in prior application cycles.

[14]We later show that including these omitted students does not change our key results.

[15]This approach would treat, for instance, a student we did not match as if they earned zero units, did not transfer, did not earn credentials or degrees, and so on. The drawback with this approach, and the reason we do not adopt it in our main analyses, is that it means we are mismeasuring (specifically, understating) the levels of these variables for students who did actually enroll in community college but we were not able to match to the community college data.

[16]CSAC obtains enrollment data from community colleges and matches them to its data by Social Security Number (SSN). Columns 3 and 4 of Table 1 depict the 47,197 students that are enrolled in the CCC system in the fall after they applied for aid according to the SSN match CSAC does to the data from the community colleges but that we could not match using the fuzzy match on name and DOB).

[17]Discussed in the Data section above, we have an accurate measure of community college enrollment based on data provided to CSAC by community colleges and matched by SSN, but these data do not have information on courses taken or financial aid receipt.

[18]Ideally we would have a longer set of pre-period data but we did not gain access to these data, and changes to the Competitive point award formula would make these data unhelpful for our analysis.

Tables and Figures

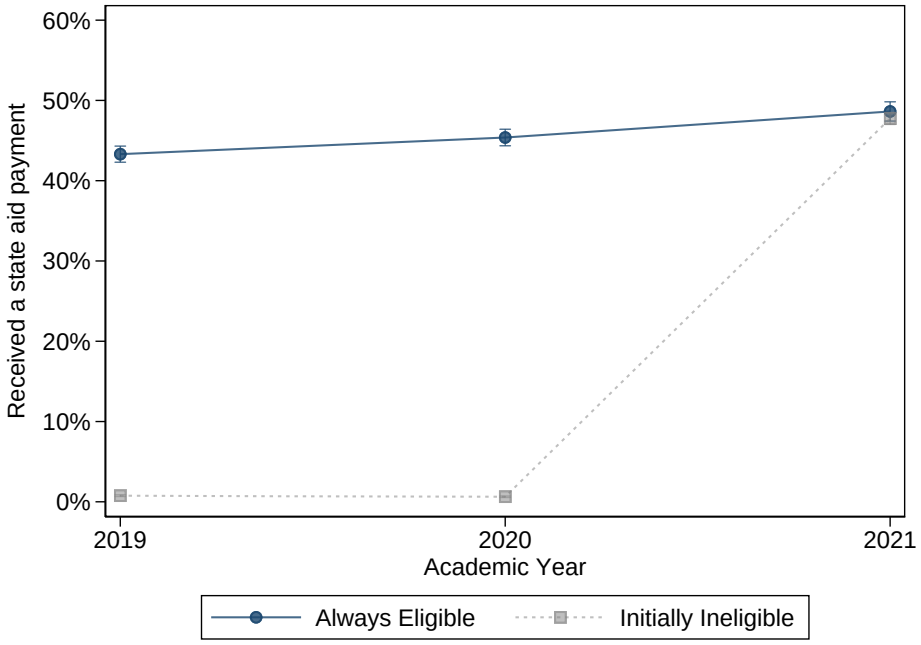

Figure 1: Percent of Cal Grant applicants who received a state aid payment

Notes: The analytic sample consists of 66,916 CSAC applicants who applied for aid in 2019-20, 2020-21, and 2021-22 and enrolled in a California community college for at least one unit. Always Eligible students are defined as those whose calculated Competitive award score was greater than 606, and would have received the offer of state aid in all application years. Initially Ineligible applicants are defined as those whose calculated Competitive award score was below 594 and were ineligible for aid prior to the expansion in 2021-22.

Table 1: Summary Statistics

	(1)	(2)	(3)	(4)	(5)	(6)
	Analytical sample		Applicants unobserved in CCC		Applicants not enrolled in CCC	
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Application Points	508.39	135.57	525.03	135.66	534.46	135.86
Expected Family Contribution	1036.72	2318.12	910.94	4397.13	873.33	3361.75
Family income	17890.54	14850.20	18991.77	14767.97	18582.46	15064.23
Dependent	0.22	0.42	0.04	0.20	0.06	0.23
Family size	2.24	1.61	2.21	1.51	2.21	1.52
Age	27.00	7.62	32.68	8.57	32.72	9.49
GPA	2.93	0.53	2.90	0.51	2.87	0.51
Prior CCC units earned	61.87	29.17	65.41	39.22	61.23	31.08
Prior Certificate/Associate Degree Attainment	0.09	0.29	0.16	0.36	0.13	0.34
N	.	66,916	.	47,197	.	7,581

Notes: This table shows the mean and standard deviation of student-level characteristics. The analytic sample (columns 1 and 2) consists of Cal Grant applicants in calendar year 2019, 2020, and 2021 who matched to the community college data and were enrolled in at least one unit. Columns 3 and 4 describe Cal Grant applicants who were considered to have enrolled in community college based on CSAC data but were not observed in the community college transcript data, likely due to an inability to match by name and birthdate. Columns 5 and 6 describe Cal Grant applicants who did not enroll in community college.

Table 2: Impacts of Cal Grant Expansion on Applicant Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Application Points	Expected Family Contribution	Family Income	Dependent	Family Size	Age	GPA	Prior CCC units earned	Prior Certificate/Associate Degree Attainment
Ineligible ×2020	–8.64***	153.03***	–462.36**	–0.02***	–0.17***	0.48***	–0.01	2.03***	0.01
	(1.40)	(27.61)	(225.36)	(0.01)	(0.03)	(0.18)	(0.01)	(0.61)	(0.01)
Ineligible ×2021	–13.16***	199.37***	1231.93***	0.02***	–0.02	0.12	–0.00	–1.31**	–0.00
	(1.59)	(29.35)	(265.72)	(0.01)	(0.03)	(0.20)	(0.01)	(0.66)	(0.01)
N	66,916	66,916	66,916	66,916	66,916	66,916	66,916	66,916	66,916
R^2	0.47	0.07	0.17	0.05	0.00	0.04	0.03	0.01	0.00
PreT Mean	454.31	1377.25	21013.23	0.27	2.23	25.98	2.89	63.41	0.09

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 3: Impacts of Cal Grant Expansion on Community College Enrollment

	(1)
	Enroll in CC (C2)
Ineligible $\times 2020$	0.00
	(0.00)
Ineligible $\times 2021$	0.03***
	(0.01)
N	121,694
R^2	0.05
PreT Mean	0.94

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021, including those who were not enrolled in community college. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 4: Impacts of Cal Grant Expansion on Financial Aid Receipt

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Received Cal Grant B	Cal Grant B Aid ($)	Total Cal Grant Aid ($)	Received Pell Grant	Pell Grant Aid ($)	Received BOG Waiver	BOG Waiver Amount ($)	Received Federal Loan	Federal Loan Aid ($)
Ineligible $\times$2020	–0.01	39.20	–18.82	0.00	–9.17	–0.00	–3.49	0.00	11.63
	(0.01)	(26.70)	(36.82)	(0.01)	(48.71)	(0.00)	(9.23)	(0.00)	(30.02)
Ineligible $\times$2021	0.41***	536.20***	784.16***	0.04***	181.53***	0.01***	38.41***	0.01**	51.49
	(0.01)	(30.75)	(42.15)	(0.01)	(54.52)	(0.00)	(11.90)	(0.00)	(33.39)
N	66,916	66,916	66,916	66,916	66,916	66,916	66,916	66,916	66,916
R^2	0.32	0.19	0.18	0.07	0.11	0.01	0.03	0.02	0.02
PreT Mean	0.01	9.09	15.16	0.48	1520.07	0.95	726.63	0.03	179.91

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Total Cal Grant aid includes both Cal Grant B and the Supplemental Grant. BOG refers to the Board of Governor Fee Waiver, which provides free community college tuition to eligible students; BOG was recently renamed as the California Promise Grant. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 5: Impacts of Cal Grant Expansion on First-Year Community College Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Units Attempted (Fall)	Units Earned (Fall)	GPA (Fall)	Persist to Spring	Units Attempted (Spring)	Units Earned (Spring)	GPA (Spring)
Ineligible $\times$2020	0.04	0.08	0.03	–0.00	–0.05	–0.15	–0.04
	(0.09)	(0.09)	(0.02)	(0.01)	(0.11)	(0.10)	(0.03)
Ineligible $\times$2021	0.33***	0.28***	0.03	0.01	0.27**	0.13	–0.06*
	(0.11)	(0.11)	(0.03)	(0.01)	(0.12)	(0.11)	(0.03)
N	66,916	66,916	57,740	66,916	66,916	66,916	41,666
R^2	0.03	0.05	0.14	0.01	0.02	0.03	0.11
PreT Mean	8.58	6.37	2.80	0.70	6.10	4.47	2.86

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 6: Impacts of Cal Grant Expansion on Community College Units Taken and Earned in the First-Year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Units Attempted				Units Earned			
	≤ 5	6-11	12-14	≥ 15	≤ 5	6-11	12-14	≥ 15
	1st Fall							
Ineligible $\times$2020	–0.01	0.01	0.00	–0.00	–0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
Ineligible $\times$2021	–0.04***	0.01	0.02**	0.01	–0.03***	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
PreT Mean	0.26	0.45	0.20	0.08	0.44	0.39	0.12	0.04
	1st Spring							
Ineligible $\times$2020	0.01	–0.01	0.00	–0.00	0.01	0.01	–0.02***	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
Ineligible $\times$2021	–0.02*	–0.00	0.01*	0.01	–0.01	0.01	–0.01	0.01**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
PreT Mean	0.47	0.33	0.13	0.06	0.61	0.27	0.08	0.03
N	66,916	66,916	66,916	66,916	66,916	66,916	66,916	66,916

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 7: Impacts of Cal Grant Expansion on Three-Year Community College Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)
	Total CGB Aid ($)	Total Units Attempted	Total Units Earned	GPA	Certificate/Associate Degree	Transfer
Ineligible ×2020	108.59	–0.33	–0.24	0.02	0.01	0.00
	(66.69)	(0.47)	(0.38)	(0.02)	(0.01)	(0.01)
Ineligible ×2021	958.28***	0.77	0.66	0.04	0.03***	0.01
	(79.88)	(0.51)	(0.42)	(0.03)	(0.01)	(0.01)
N	66,916	66,916	66,916	60,995	66,916	66,916
R^2	0.14	0.03	0.04	0.13	0.03	0.02
PreT Mean	232.33	30.53	22.27	2.74	0.36	0.24

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 8: Robustness Checks for Community College Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Units Earned (Fall)	GPA (Fall)	Persist to Spring	Units Earned (Spring)	GPA (Spring)	Units Earned (3 Years)	Certificate/Associate Degree
				Panel A: No Control			
Ineligible ×2020	0.03	0.03	–0.01	–0.20**	–0.04	–0.44	0.01
	(0.10)	(0.03)	(0.01)	(0.10)	(0.03)	(0.39)	(0.01)
Ineligible ×2021	0.33***	0.03	0.02*	0.19*	–0.06	0.98**	0.03***
	(0.11)	(0.03)	(0.01)	(0.11)	(0.03)	(0.42)	(0.01)
N	66,916	57,740	66,916	66,916	41,666	66,916	66,916
PreT Mean	6.37	2.80	0.70	4.47	2.86	22.27	0.36
				Panel B: No Donut			
Ineligible ×2020	0.05	0.04	–0.01	–0.14	–0.03	–0.25	0.01
	(0.09)	(0.02)	(0.01)	(0.09)	(0.03)	(0.35)	(0.01)
Ineligible ×2021	0.27***	0.04	0.02*	0.18*	–0.04	0.67*	0.03***
	(0.10)	(0.03)	(0.01)	(0.10)	(0.03)	(0.39)	(0.01)
N	70,129	60,500	70,129	70,129	43,679	70,129	70,129
PreT Mean	6.37	2.80	0.70	4.47	2.86	22.27	0.36
				Panel C: Apply after May 2nd			
Ineligible ×2020	0.07	0.02	–0.00	–0.14	–0.05	–0.02	0.01
	(0.10)	(0.03)	(0.01)	(0.11)	(0.03)	(0.41)	(0.01)
Ineligible ×2021	0.21*	0.02	0.02	0.08	–0.07*	0.59	0.03***
	(0.11)	(0.03)	(0.01)	(0.12)	(0.04)	(0.45)	(0.01)
N	57,184	49,514	57,184	57,184	35,459	57,184	57,184
PreT Mean	6.34	2.79	0.70	4.42	2.85	21.99	0.36
				Panel D: Full Sample (Code 0 for Unenrolled Sample)			
Ineligible ×2020	0.09	0.03	0.00	–0.05	–0.04	0.04	0.01*
	(0.07)	(0.02)	(0.01)	(0.06)	(0.03)	(0.26)	(0.01)
Ineligible ×2021	0.32***	0.03	0.03***	0.22***	–0.06*	1.13***	0.03***
	(0.07)	(0.03)	(0.01)	(0.07)	(0.03)	(0.27)	(0.01)
N	121,694	57,740	121,694	121,694	41,666	121,694	121,694
PreT Mean	3.62	2.80	0.40	2.54	2.86	12.65	0.21

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 9: Impacts of Cal Grant Expansion on Community College Outcomes by Subgroup

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Total Cal Grant Aid ($)	Units Earned (Fall)	Persist to Spring	Units Earned (Spring)	Units Earned (3 Years)	Certificate/Associate Degree	Transfer
				Panel A: Have Children			
Ineligible ×2020	162.19**	0.35**	0.03	0.06	0.62	0.01	0.01
	(68.05)	(0.17)	(0.02)	(0.19)	(0.71)	(0.02)	(0.01)
Ineligible ×2021	1627.16***	0.27	0.01	0.09	1.24	0.04**	0.04**
	(89.20)	(0.19)	(0.02)	(0.20)	(0.77)	(0.02)	(0.01)
N	15,126	15,126	15,126	15,126	15,126	15,126	15,126
PreT Mean	25.10	6.14	0.68	4.33	22.32	0.37	0.16
				Panel B: No Children			
Ineligible ×2020	–75.15**	0.08	–0.01	–0.19	–0.69	0.01	–0.01
	(31.97)	(0.12)	(0.01)	(0.13)	(0.50)	(0.01)	(0.01)
Ineligible ×2021	546.16***	0.27*	0.02	0.14	0.42	0.03**	–0.02
	(38.75)	(0.14)	(0.01)	(0.15)	(0.55)	(0.01)	(0.01)
N	51,789	51,789	51,789	51,789	51,789	51,789	51,789
PreT Mean	13.71	6.41	0.70	4.49	22.26	0.36	0.25
				Panel C: Not Applied the Year Before			
Ineligible ×2020	2.38	0.13	–0.00	–0.04	0.09	0.01	0.00
	(46.53)	(0.12)	(0.01)	(0.12)	(0.48)	(0.01)	(0.01)
Ineligible ×2021	936.42***	0.44***	0.03**	0.29**	1.61***	0.05***	0.00
	(52.59)	(0.13)	(0.01)	(0.13)	(0.52)	(0.01)	(0.01)
N	44,215	44,215	44,215	44,215	44,215	44,215	44,215
PreT Mean	17.65	6.68	0.71	4.74	23.55	0.34	0.23
				Panel D: Applied the Year Before			
Ineligible ×2020	39.23	0.06	0.00	–0.21	–0.18	0.01	0.00
	(52.25)	(0.16)	(0.02)	(0.17)	(0.62)	(0.02)	(0.02)
Ineligible ×2021	598.34***	0.01	–0.01	–0.04	–0.76	0.00	0.01
	(64.20)	(0.19)	(0.02)	(0.19)	(0.70)	(0.02)	(0.02)
N	22,701	22,701	22,701	22,701	22,701	22,701	22,701
PreT Mean	10.88	5.84	0.68	4.00	20.07	0.40	0.24

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

Table 10: Impacts of Cal Grant Expansion on Community College Outcomes by Prior Attainment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Total Cal Grant Aid ($)	Units Earned (Fall)	Persist to Spring	Units Earned (Spring)	Units Earned (3 Years)	Certificate/Associate Degree	Transfer
				Panel A: Prior Units Earned < 60			
Ineligible $\times$2020	–31.59	0.13	–0.00	–0.15	–0.31	0.01	0.01
	(54.06)	(0.13)	(0.01)	(0.14)	(0.54)	(0.01)	(0.01)
Ineligible $\times$2021	1030.90***	0.31**	0.02*	0.12	1.16*	0.04***	0.00
	(61.52)	(0.14)	(0.01)	(0.15)	(0.60)	(0.01)	(0.01)
N	34,351	34,351	34,351	34,351	34,351	34,351	34,351
PreT Mean	21.48	6.67	0.73	4.88	24.58	0.30	0.19
				Panel B: Prior Units Earned ≥ 60			
Ineligible $\times$2020	28.02	0.08	0.01	–0.05	0.24	0.01	–0.01
	(43.45)	(0.14)	(0.01)	(0.14)	(0.52)	(0.01)	(0.01)
Ineligible $\times$2021	533.12***	0.27*	0.01	0.19	0.23	0.03*	0.01
	(52.69)	(0.15)	(0.02)	(0.16)	(0.57)	(0.02)	(0.01)
N	32,565	32,565	32,565	32,565	32,565	32,565	32,565
PreT Mean	9.22	6.09	0.67	4.08	20.10	0.42	0.28
				Panel C: No Earned Certificate/Associate Degree Before			
Ineligible $\times$2020	–23.83	0.10	–0.01	–0.18*	–0.44	0.01	0.01
	(39.37)	(0.10)	(0.01)	(0.11)	(0.40)	(0.01)	(0.01)
Ineligible $\times$2021	836.06***	0.30***	0.02*	0.15	0.71	0.04***	0.01
	(44.75)	(0.11)	(0.01)	(0.12)	(0.44)	(0.01)	(0.01)
N	60,943	60,943	60,943	60,943	60,943	60,943	60,943
PreT Mean	15.41	6.41	0.71	4.54	22.57	0.36	0.24
				Panel D: Earned Certificate/Associate Degree Before			
Ineligible $\times$2020	43.02	–0.11	0.03	0.10	1.78	0.02	0.00
	(94.03)	(0.31)	(0.03)	(0.31)	(1.17)	(0.03)	(0.02)
Ineligible $\times$2021	275.26**	0.07	–0.04	0.01	0.26	0.02	–0.01
	(121.00)	(0.34)	(0.03)	(0.34)	(1.29)	(0.04)	(0.03)
N	5,973	5,973	5,973	5,973	5,973	5,973	5,973
PreT Mean	12.61	6.02	0.62	3.69	19.13	0.37	0.19

Notes: This table estimates the impact of the expansion policy as described in equation (1). The analytic sample consists of CSAC applicants in calendar years 2019, 2020, and 2021 who were in enrolled community college for at least one unit. Treatment students are defined as applicants with calculate points below 594, who would have been ineligible for the Cal Grant program prior to the 2021 expansion. The mean of the dependent variable (PreT Mean) is calculated from treatment applicants in 2019 and 2020. Robust standard errors in parentheses. */**/*** indicates significance at the 10/5/1% levels.

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