

Student Loan Borrowers and Pandemic-Era Interventions in California¹

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Executive Summary and Findings

From 2020 to 2023, the federal government implemented a series of large-scale, high-profile interventions to address the financial uncertainty and economic emergency caused by the COVID-19 pandemic, and to provide long-term fixes to several existing programs aimed at helping ease the burden of student loans on borrowers and families. These interventions included several rounds of funding passed by Congress to provide direct funding to institutions of higher education and students, a pause on federal student loan payments, and reforms to address long-standing problems in existing debt relief programs including the Public Service Loan Forgiveness (PSLF) program.

Given the nationwide scale and simultaneous nature of many of these efforts, research on the impacts of any single policy or program remains limited. This analysis seeks to better understand the effects of these policies on borrowers, families, and students in California. Leveraging proprietary credit panel data, qualitative interviews with borrowers, and publicly available data from the U.S. Department of Education, we focus on the effects of three major interventions: the student loan payment pause, a one-time PSLF “waiver” to increase access to debt relief for public service workers, and funding to institutions from the Higher Education Emergency Relief Fund (HEERF). Our findings include:

- The student loan repayment pause narrowed the gap in homeownership between relatively advantaged and disadvantaged households in California and reduced the likelihood of delinquency on any type of loan more for borrowers subject to the payment pause.
- According to qualitative interviews of borrowers in California, the payment pause allowed student loan borrowers greater opportunity to consider family planning, save money, reduce other debts, relieve mental distress, while also enabling some participants to afford meaningful life experiences and make needed investments, such as house repairs.
- Improvements to the PSLF program that led to loan cancellation allowed borrowers the financial room to make large purchases and catch up on savings, as well as provide immediate economic support to family members.

In California, public higher education institutions dedicated HEERF funds disproportionately to defraying the cost of tuition for students, which may have contributed to the state largely maintaining enrollment rates as institutions in other states suffered considerable declines.

I. Introduction

In response to the COVID-19 pandemic, in March 2020 Congress directed tens of billions of dollars to institutions of higher education to enable them to weather the economic uncertainty and continue to meet the needs of students. Legislation provided three rounds of Higher Education Emergency Relief funding (“HEERF”): HEERF I in the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”),⁸ then HEERF II in the Coronavirus Response and Relief Supplemental Appropriations Act (“CRRSA Act”)⁹ enacted nine months later, and finally HEERF III in the American Rescue Plan Act (“ARPA”).¹⁰ Some of these pandemic-era laws specified the uses to which funds be put, requiring, for example, that a specific percentage be allocated to emergency financial aid grants to students.¹¹ In total, Congress provided financial support to institutions of higher education in excess of \$75 billion over the course of the pandemic, to be split between institutional support and direct support of students.¹² Colleges and universities also received financial support from the states, which in turn received emergency funds designated by Congress for that purpose in the CARES Act¹³ and the CRRSA Act.¹⁴ To put these numbers in context, in the last year before the pandemic, the U.S. Department of Education (“ED” or “the Department”) provided slightly more than \$29 billion in total grant aid to students through the Title IV financial aid programs,¹⁵ while federal support of science and engineering research at institutions of higher education reached \$38 billion that year.¹⁶

These interventions were noteworthy due to both the scale and the diversity of efforts that were employed across the higher education system. By design, states and individual institutions enjoyed considerable flexibility when it came to spending this money within guidance provided by ED.¹⁷ Some colleges and universities used federal funds to pay off debts owed by students directly to the institutions, thereby removing a potential impediment to those students’ continued enrollment and eventual graduation.¹⁸ Other colleges and universities spent federal emergency funds on health care, housing costs, and other student basic needs.¹⁹ After all, the pandemic

⁸ Pub. L. 116-136 (2020), §18004 et seq.

⁹ Pub. L. 116-260 (2020), §314 et seq.

¹⁰ Pub. L. 117-2 (2021), §2003 et seq.

¹¹ See, e.g., Pub. L. 117-2, §2003(7) (requiring that institutions of higher education “use not less than 50 percent of such allocation to provide emergency financial aid grants to students”).

¹² U.S. Department of Education, Higher Education Emergency Relief Fund: Overview of 2022 Annual Performance Reports 3 (2024), <https://api.covid-relief-data.ed.gov/collection/api/v1/public/docs/HEERF%202022%20Annual%20Performance%20Report.pdf>.

¹³ Pub. L. 116-136, §18002.

¹⁴ Pub. L. 116-260, §312.

¹⁵ U.S. Department of Education, Fiscal Year 2019 Annual Report 11 (2020), <https://www2.ed.gov/about/reports/annual/2019report/fsa-report.pdf>.

¹⁶ Christopher V. Pece, Federal Science and Engineering Support for Academic Institutions Increased 3% in FY 2022; Support to HBCUs Increased 19%, National Center for Science and Engineering Statistics (2024), <https://nces.nsf.gov/pubs/nsf24325/figure/1>. The total reached \$41 billion in nominal dollars in fiscal 2022. *Id.*

¹⁷ See, e.g., U.S. Department of Education, Higher Education Emergency Relief Fund Higher Education Emergency Relief Fund (HEERF) II Public and Private Nonprofit Institution (a)(1) Programs (CFDAs 84.425E and 84.425F) Frequently Asked Questions, <https://www2.ed.gov/about/offices/list/ope/faqsfora1crrsaheerfii.pdf>

¹⁸ U.S. Department of Education, Higher Education Emergency Relief Fund: Overview of 2021 Annual Performance Reports 3 (2024), <https://www2.ed.gov/about/offices/list/ope/heerf-2021-annual-performance-report.pdf>.

¹⁹ *Id.*

posed a diverse and terrifying array of challenges to students, faculty, staff, administrators, and their institutions.

This direct funding of public colleges and universities, and students, was also implemented in the context of another unprecedented policy intervention: the total cessation of payments for the majority of borrowers with federal student loans who would have otherwise been in repayment. ED, under the Trump Administration, announced this “payment pause” in March 2020 as the nation largely shut down in response to the pandemic²⁰; the agency relied on its authority under the HEROES Act of 2003 which allowed the Secretary of Education to waive statutory or regulatory provisions for the student financial aid programs in response to a national emergency.²¹ The Trump Administration renewed the pause multiple times, as did the subsequent Biden Administration, and payment obligations did not resume until fall 2023, more than three years after they had been initially paused.²² The suspension of payment obligations, which benefitted borrowers whose loans were held by the federal government,²³ provided a unique natural experiment to study the effects of complete relief.

The Biden Administration implemented several other policies in addition to the payment pause in the effort to bolster borrowers confronting conditions of extreme uncertainty and hardship, including improvements to tracking of borrowers’ obligations,²⁴ attempting to simplify borrowers’ access to loan programs and management,²⁵ and easing the path to debt cancellation for borrowers deceived by institutions of higher education that provided misleading information about job placement rates or other attributes.²⁶

²⁰ Education Department, Press release: Delivering on President Trump’s Promise, Secretary DeVos Suspends Federal Student Loan Payments, Waives Interest During National Emergency, Mar. 20, 2020. Technically, the Education Department put every federal student loan borrower into an administrative forbearance, a form of relief the Department may provide “due to a... national emergency.” 34 C.F.R. §§674.33(d)(5). When the Biden Administration relied on the same statutory authority in an attempt to permanently cancel between \$10,000 and \$20,000 per student loan borrower, legal challenges ultimately led to a Supreme Court ruling that the legislation did not confer such authority. *Biden v. Nebraska*, 600 U.S. ___, *15 (2023).

²¹ *Id.*; see also 20 U.S.C. §1098bb(a)(1) (authorizing the Secretary of Education to Secretary to “waive or modify any statutory or regulatory provision applicable to the student financial assistance programs under title IV of the [Higher Education Act of 1965] as the Secretary deems necessary in connection with a war or other military operation or national emergency”).

²² Legislation to lift the debt ceiling in May 2023 included a mandatory termination date for the payment pause. Pub. L. 118-5 (2023), §271.

²³ The U.S. Department of Education makes the vast majority of student loans in the United States and since 2010, the Department has made and holds those loans directly in its portfolio. College Board, Trends in Student Aid 2023 at 32, <https://research.collegeboard.org/media/pdf/Trends%20Report%202023%20Updated.pdf> (reporting that in 2021-22 the federal government made nearly \$90 billion in student loans while private lenders made \$14.5 billion). Federally guaranteed student loans made in prior years and held by other entities were not subject to the pause initiated by the Trump Administration.

²⁴ U.S. Department of Education, Press Release: Department of Education Announces Actions to Fix Longstanding Failures in the Student Loan Programs, Apr. 19, 2022, <https://www.ed.gov/news/press-releases/department-education-announces-actions-fix-longstanding-failures-student-loan-programs>.

²⁵ Richard Cordray, Chief Operating Officer, Office of Federal Student Aid, U.S. Department of Education, Announcing the Next Generation of Federal Student Loan Servicing, May 19, 2022, <https://blog.ed.gov/2022/05/announcing-the-next-generation-of-federal-student-loan-servicing/>.

²⁶ 87 Fed. Reg. 65905 (Nov. 1, 2022).

Most relevant for purposes of this study is the one-time “waiver” announced by the Department to promote accessibility of debt cancellation through the Public Service Loan Forgiveness program (“PSLF”) in the second year of the pandemic.²⁷ PSLF provides for cancellation of student loan debt obligations for borrowers who make 120 required monthly payments on their student loans, meaning payments for ten years, and spend those years working in a recognized public interest job.²⁸ To access cancellation under PSLF, borrowers needed to hold Direct federal loans and be enrolled in an eligible repayment plan. Due to program complexity, administrative negligence, and mismanagement by the student loan industry, the vast majority of public service workers with student debt were unable to access the cancellation to which they were entitled under law. Responding to this, the waiver policy implemented by the Biden Administration allowed borrowers to include payments made on all federal student loan programs and all loan repayment plans to meet the requirement that they make 120 payments, a move benefitting borrowers who had different kinds of federal student loans or who had switched repayment plans or whose loan servicer had mishandled an account.²⁹

In California, millions of borrowers stood to benefit from the interventions through the federal financial aid and loan programs, in addition to the direct pandemic support received by institutions of higher education. In California alone, public colleges and universities received approximately \$8.8 billion in emergency federal relief under the three rounds of HEERF funding legislation described above: \$4.4 billion to the state’s community colleges, \$3.1 billion to the California State University system, and \$1.4 billion to the University of California.³⁰ The institutions in the state’s public higher education systems enjoyed considerable discretion in spending the money they received, notwithstanding federal legislation’s broad division of funds between institutional support and student support.³¹ A study by the Public Policy Institute of California (“PPIC”) in 2022 found that the vast majority of public colleges and universities used financial aid information they already possessed to allocate funds to students, in order to get money out the door to students quickly.³² Average emergency grants to students varied with institutional type, with larger awards generally going to students enrolled at the University of California and smaller awards to students enrolled in community colleges.³³ PPIC’s survey of public colleges and universities revealed that these institutions used their share of emergency

²⁷ Education Department, Fact Sheet: Public Service Loan Forgiveness (PSLF) Program Overhaul, Oct. 6, 2021, <https://www.ed.gov/news/press-releases/fact-sheet-public-service-loan-forgiveness-pslf-program-overhaul> (hereinafter “PSLF Overhaul Fact Sheet”).

²⁸ 34 C.F.R. §685.219(c).

²⁹ PSLF Overhaul Fact Sheet. One reason this waiver mattered was the disruption to student loan tracking as a result of the transition from the old guaranteed federal loan program, which expired in 2010, to direct lending by the government thereafter; some borrowers had both types of loans, potentially held by different entities. *Id.* Then there were just errors by servicers. *Id.*

³⁰ Legislative Analyst’s Office, Higher Education: Federal Relief Funding for Higher Education (July 2021), <https://lao.ca.gov/Education/EdBudget/Details/522>. To put this figure in some perspective, total state and local support to public higher education in the state totaled nearly \$24.3 billion in 2023 (and just about 10 percent of that amount was allocated to financial aid to students). State Higher Education Executive Officers Association, State Higher Education Finance: FY 2023, tbl. 1.2, https://shf.shfeo.org/report/?report_page=sources-and-uses-of-state-funding#sources-of-state-funding.

³¹ Further, institutions could use funds allocated to them to provide supplemental financial aid, for example.

³² Jacob Jackson, Kevin Cook, and Darriya Starr, COVID-19 Emergency Funding and California’s Higher Education Systems, Public Policy Institute of California 8-9 (2022), <https://www.ppic.org/?show-pdf=true&docraptor=true&url=https%3A%2F%2Fwww.ppic.org%2Fpublication%2F-covid-19-emergency-funding-and-californias-higher-education-systems%2F>.

³³ *Id.* at 11.

funds to make up for lost revenue from tuition and other sources, to cover the costs of providing online instruction and of enabling social distancing on campus, to pay for health care, and to provide supplemental aid to students.³⁴ Supplemental aid included “additional emergency aid; reimbursements for housing, room, and board; other fee refunds; and tuition discounts,” with most covering for tuition reimbursement.³⁵ However, institutions did not rush to spend all the money at once; two years into the pandemic, collectively they still retained more than \$2 billion of the federal funds they had received.³⁶

The diversity of methods used and priorities set by institutions of higher education complicates assessment of effects of these various policy interventions on students. For example, some institutions prioritized students who had enrolled for a larger number of credits, directing more financial support to them.³⁷ Students enrolled full-time, accordingly, received larger awards of emergency aid. Even when institutions awarded funds consistently, emergency aid allocations did not consistently take into account the different financial circumstances of student recipients. For example, using information from students’ prior financial aid applications resulted in smaller emergency awards to those who were expected to contribute a greater amount to the cost of education, regardless of whether the financial circumstances of students’ families had changed as a result of or prior to the pandemic.³⁸ The adverse effects of the pandemic on broad swaths of the economy, especially those sectors employing more lower-income people, have been well documented.³⁹ The same can be said of disproportionate effects of illness, the need to care for ill family members, and the burden of related health costs.

Even as the pandemic raged and the payment pause was in effect, scholars undertook studies examining the effects on borrowers. Research found that borrowers’ credit scores improved significantly during the pandemic and payment pause,⁴⁰ while rates of delinquency and default

³⁴ *Id.* at 14.

³⁵ *Id.* at 15.

³⁶ Jacob Jackson, Kevin Cook, and Darriya Starr, COVID-19 Emergency Funding and California’s Higher Education Systems, Public Policy Institute of California 3 (2022), <https://www.ppic.org/?show-pdf=true&docraptor=true&url=https%3A%2F%2Fwww.ppic.org%2Fpublication%2F covid-19-emergency-funding-and-californias-higher-education-systems%2F>. The state auditor, after examining the first rounds of HEERF spending, reported in 2021 that campuses “did not maximize available [federal] funds,” because they used HEERF money when funding was available from the Federal Emergency Management Agency for a given purpose. California State Auditor, Higher Education Emergency Relief Fund 14-15 (2021), <https://information.auditor.ca.gov/pdfs/reports/2021-611.pdf>. The finding highlights shortcomings in oversight of federal emergency funding.

³⁷ Jacob Jackson, Kevin Cook, and Darriya Starr, COVID-19 Emergency Funding and California’s Higher Education Systems, Public Policy Institute of California 9 (2022), <https://www.ppic.org/?show-pdf=true&docraptor=true&url=https%3A%2F%2Fwww.ppic.org%2Fpublication%2F covid-19-emergency-funding-and-californias-higher-education-systems%2F>.

³⁸ *Id.* at 9.

³⁹ See, e.g., Wendy Edelberg and Jay Shambaugh, How the Pandemic Is Changing the Economy, Hamilton Project (2020), at 4, https://www.hamiltonproject.org/wp-content/uploads/2023/01/Edelberg_Shambaugh_LO_FINAL.pdf (providing summary of disparate effects of shutdown of sectors of economy on differently situated workers).

⁴⁰ Daniel Mangrum, Joelle Scally, and Crystal Wang, *Three Key Facts from the Center for Microeconomic Data’s 2022 Student Loan Update*, Federal Reserve Bank of New York, Aug. 9, 2022, <https://libertystreeteconomics.newyorkfed.org/2022/08/three-key-facts-from-the-center-for-microeconomic-datas-2022-student-loan-update/>.

unsurprisingly declined sharply.⁴¹ Correspondingly, study of the impact of the pause in California found that gaps in rates of delinquency and default along lines of race narrowed as both approached zero.⁴² Qualitative inquiry found that during the payment pause, borrowers described feeling decreased levels of anxiety, increased sense of financial stability, and consequently greater readiness to build a family.⁴³

Research also yielded insights on what the effects of student debt obligations had been prior to the pause: Dinerstein et al. found that borrowers took on new debt obligations, suggesting that student loans had crowded out other forms of credit-financed consumption involving purchases of homes, cars, and other major investments, for example.⁴⁴ Beamer et al concluded that the repayment pause paradoxically enabled more student loan repayment in the portfolio than was the case when payments were notionally obligatory.⁴⁵ More troubling, though, are the findings of qualitative study of student loan borrowers finding that the resumption of payment obligations was a source of stress and likely financial hardship for many.⁴⁶

As of this writing, too little time has passed since the onset of the pandemic and the implementation of these policies to bolster institutions of higher education to cope with its effects to be certain of the longer-term financial health of colleges and universities, as well as that of the students who borrow to attend them. Public institutions were still recovering from the lasting effects of the 2008 financial crisis and ensuing Great Recession when the pandemic struck; only twice between 2008 and 2023 did spending per full-time student exceed pre-recession levels.⁴⁷ One of those years was 2023: the influx of federal money countered the effects of what would have been the typical sequence of events in an economic downturn, in which more people pursue higher education at exactly the same time that state funding declines with falling tax revenue.⁴⁸ This pattern historically has forced colleges and universities to raise tuition and fees and impose higher costs on students who are more likely to be coping with greater financial precarity. During the pandemic, in contrast, fewer students pursued higher education. Between 2020 and 2023, total enrollment at public institutions fell by 6.1 percent.⁴⁹ And at the same time, net tuition and fees – what students confront after taking aid into account – have declined.⁵⁰ The effects of the novel combination of financial challenges and generous policy interventions on students continue to become visible.

⁴¹ *Id.*

⁴² Sultana Fouzia, Dalié Jiménez, and Jonathan Glater, *Student Loans in California: A Narrative of Racial Inequality*, Student Loan Law Initiative (2023), at 7, <https://www.slli.org/databrief2>.

⁴³ Daniel A. Collier, Dan Fitzpatrick, Chloe Fann, Frederick Ingram, Carol Bruzzano, and Mecca Keyes, *Pause and Effect: Examining the Dynamics of the Student Loan Pause and the Challenge of Resuming Payments for Public Service Loan Forgiveness Borrowers* 13 (2024) (hereinafter “Collier et al.”), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4812825.

⁴⁴ Michael Dinerstein, Constantine Yannelis, and Ching-Tse Chen, *Debt Moratoria: Evidence from Student Loan Forbearance*, 6 *AER: Insights* 196, 198 (2024).

⁴⁵ Laura Beamer et al., “The Repayment Pause and the Continuing Crisis of Non-Repayment” (Jain Family Institute, June 15, 2023), <https://jainfamilyinstitute.org/the-repayment-pause-and-the-continuing-crisis-of-non-repayment/>.

⁴⁶ Collier et al., 14-18.

⁴⁷ State Higher Education Executive Officers Association, *State Higher Education Finance: FY 2023 11*, https://shef.sheeo.org/wp-content/uploads/2024/04/SHEEO_SHEF_FY23_Report.pdf.

⁴⁸ Jennifer A. Delaney, ed., *Volatility in State Spending for Higher Education* (2023).

⁴⁹ State Higher Education Executive Officers Association, *State Higher Education Finance: FY 2023 11*, https://shef.sheeo.org/wp-content/uploads/2024/04/SHEEO_SHEF_FY23_Report.pdf.

⁵⁰ *Id.*

II. Study of the Student Loan Repayment Pause in California

In terms of scale and length, the student loan payment pause remains the largest pandemic-era intervention across higher education. Most analyses of the payment pause have focused on immediate measures of financial stability including default, delinquency, as well as qualitative measures such as borrower anxiety. This analysis focuses on the impact of the payment pause on other measures of borrower hardship and the ability to build wealth, focusing specifically on California. To study the impact of the student loan repayment pause on California borrowers, we undertook a difference-in-differences analysis using the University of California-Consumer Credit Panel (UC-CCP), which contains credit records for everyone located in California. As discussed in Part I, the repayment pause was in effect from March 2020 through September 2023. For the purposes of this analysis, the repayment pause had two components: interest rates on federally held student loans were reset to 0% (reducing interest payments to \$0), and otherwise-obligatory interest payments were made voluntary.

A key difficulty in studying the repayment pause using credit reporting data is that the data does not directly identify which loans are owned by the federal government, nor does it report actual payments made on student loans (neither of which would be dispositive indicators of treatment status with respect to the repayment pause, even if we could observe them). That problem in identifying affected loans and borrowers is heightened by the simultaneous onset of other pandemic-era programs. For example, consider a hypothetical loan on which the borrower was making payments covering all interest but no principal prior to the onset of the pause (hence its balance was constant ex-ante), and then when the pause took effect stopped making payments altogether, meaning the balance would continue to be constant. That hypothetical loan would have benefited from the pause, but there's no straightforward way to detect that fact directly in the data.

We therefore take a conservative approach in assigning treatment status to loans using only the observed balance trajectory over time. Using a 1% subsample of the overall California UC-CCP (i.e., 1% of Californians with active credit reports in 2017-2023), we categorize a student loan as affected by the repayment pause if, before the pause took effect, the loan balance was increasing over time (likely due to unpaid interest), or it was decreasing over time (because the borrower was making required payments), while after the repayment pause was implemented, its balance trajectory remains flat (implying no payments were made when they were voluntary, and no interest accumulated because the rate was set to 0%). This definition of treatment would exclude the hypothetical loan described in the previous paragraph, which remained at a constant balance throughout. We then assign treatment status based on whether a borrower holds any loans categorized as affected by the pause. The control group consists of student borrowers who do not have affected loans. Table 1 reports the count and share of the analysis sample that was treated.

Table 1 – Descriptive Statistics

	Count of Borrowers	Share of the Analysis Sample
Control (Student borrowers without any pause-affected loans)	16,666	30%
Treatment (Student borrowers with at least 1 repayment-pause-affected student loan)	38,990	70%

We estimate a difference-in-differences specification of the form

$$y_{it} = \beta \cdot affected_i \cdot post_t + \gamma_i + X_{it} + \epsilon_{it}$$

where y_{it} is the outcome of interest for individual borrower i in period t , $affected_i$ indicates whether i was affected by the repayment pause as defined above, $post_t$ indicates whether period t is after the repayment pause took effect, γ_i are fixed effects for individual borrowers, X_{it} are time-varying borrower-level controls, and ϵ_{it} is the error term.

$\hat{\beta}$ is the coefficient of interest, interpreted as the change in outcome y for individual i due to the repayment pause. A causal interpretation of $\hat{\beta}$ requires the dual assumptions of parallel trends in outcomes for treated and control units, conditional on covariates, as well as no treatment spillovers from treatment to control units. Concretely, the identification concern is that different cohorts of borrowers are more or less likely to have federal loans of more recent vintage, and hence be differentially exposed to the repayment pause. Additionally, borrowers with very different pre-pause loan balances are likely to be in very different places in their economic life cycles. For example, borrowers with high pre-pause balances are likely to have gone to graduate school and/or enrolled in income-driven repayment programs that lead to rising rather than falling loan balances as they age, and these life cycle considerations may be more determinative of trends in the outcomes we care about than the repayment pause itself. Therefore, our specification uses pre-pause student loan balance decile by calendar year-quarter and age by calendar year-quarter fixed effects for X_{it} . Hence, identification of the effect of the repayment pause is within cells defined by those fixed effects, which represent comparable borrowers in economic and demographic terms, among whom exposure to the repayment pause would be more likely to represent quasi-experimental variation.

The outcomes of interest we focus on are

- Homeownership (whether i is observed to have a mortgage in the credit reporting data).
- New Homeownership (whether i is observed to have a mortgage in archive t in the credit reporting data but did not have one at $t-1$.)
- New delinquency on any type of loan (whether i is observed to have a credit record that is delinquent at time t but was current at $t-1$.)

Table 2 reports estimates of $\hat{\beta}$ from the specification above.

Table 2 - Estimates

	(1) Homeownership	(2) New Homeownership	(3) New Delinquency
ATT	0.01** (0.0032)	-0.0005 (0.0003)	-0.0019** (.0009)
Observations	55,656	55,656	55,656
Individual FE	YES	YES	YES
SD Balance Decile x YQ FE	YES	YES	YES
Age x YQ FE	YES	YES	YES

We visualize the estimates shown in Table 2 in the following three figures, which plot levels of the outcome of interest for the treatment versus control group, before and after the onset of the repayment pause. “Trend” refers to the number of quarterly archives relative to the onset of the

repayment pause. For example, '-1' means 2019Q4, i.e. the quarter prior to the beginning of the repayment pause in 2020Q1.

Figure 1 – Estimate of Homeownership

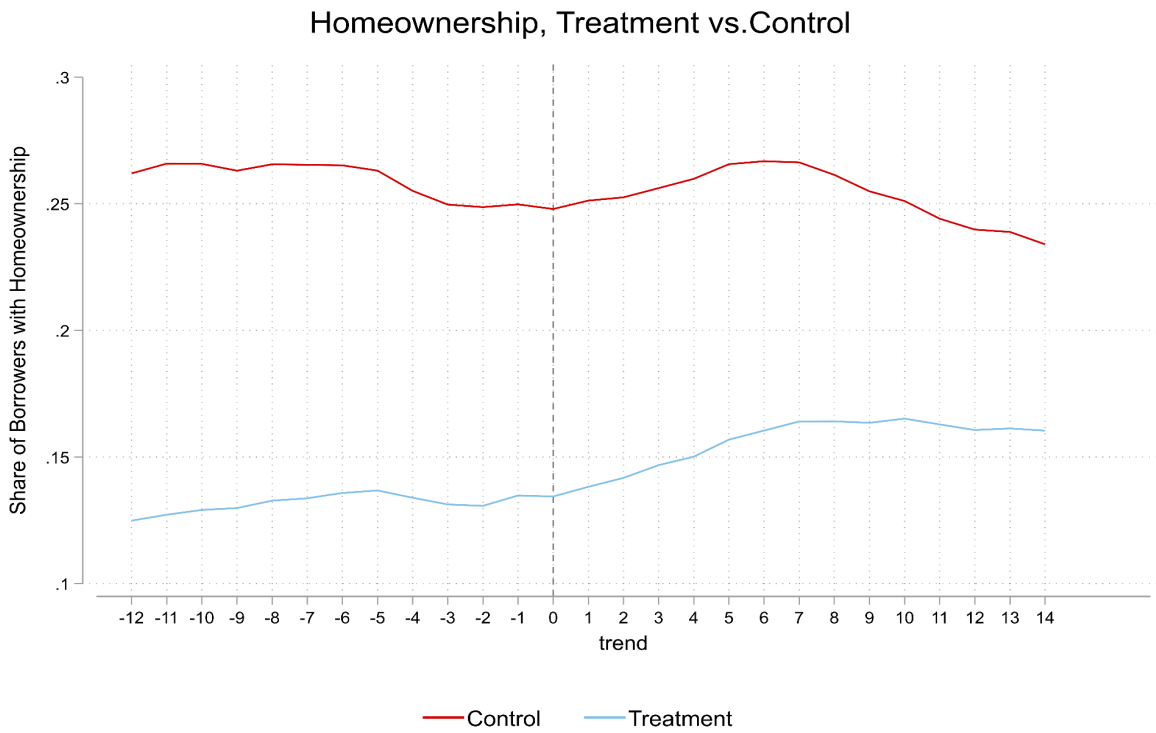


Figure 2 – Estimates for First-Time Homeownership

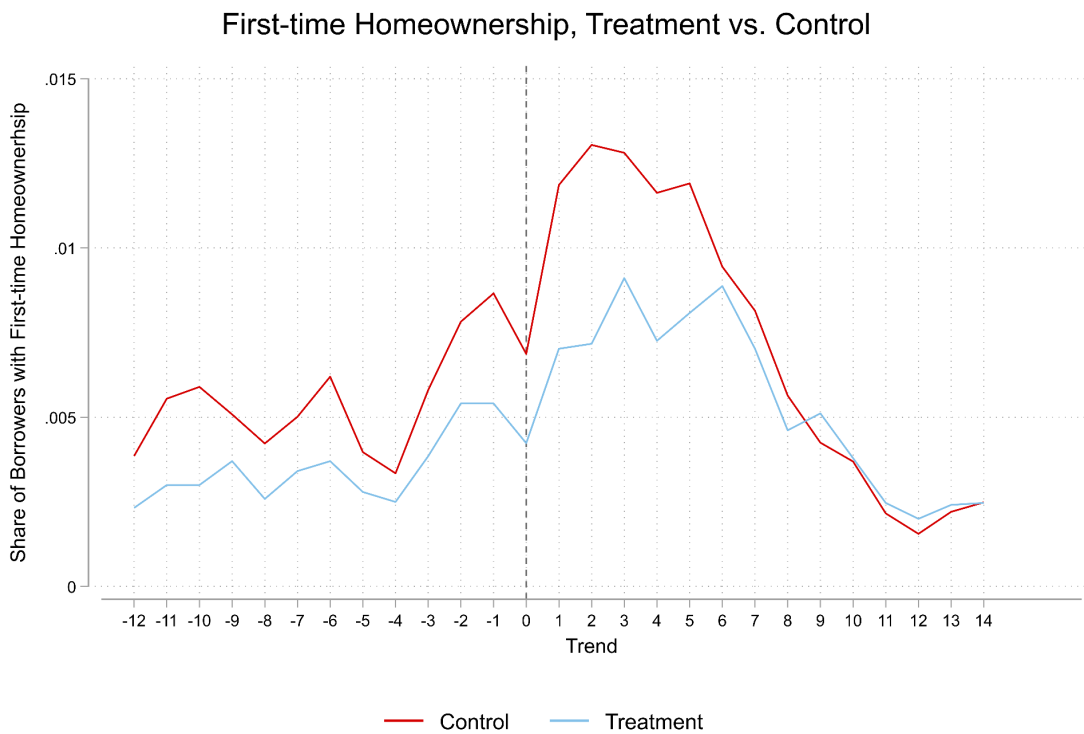
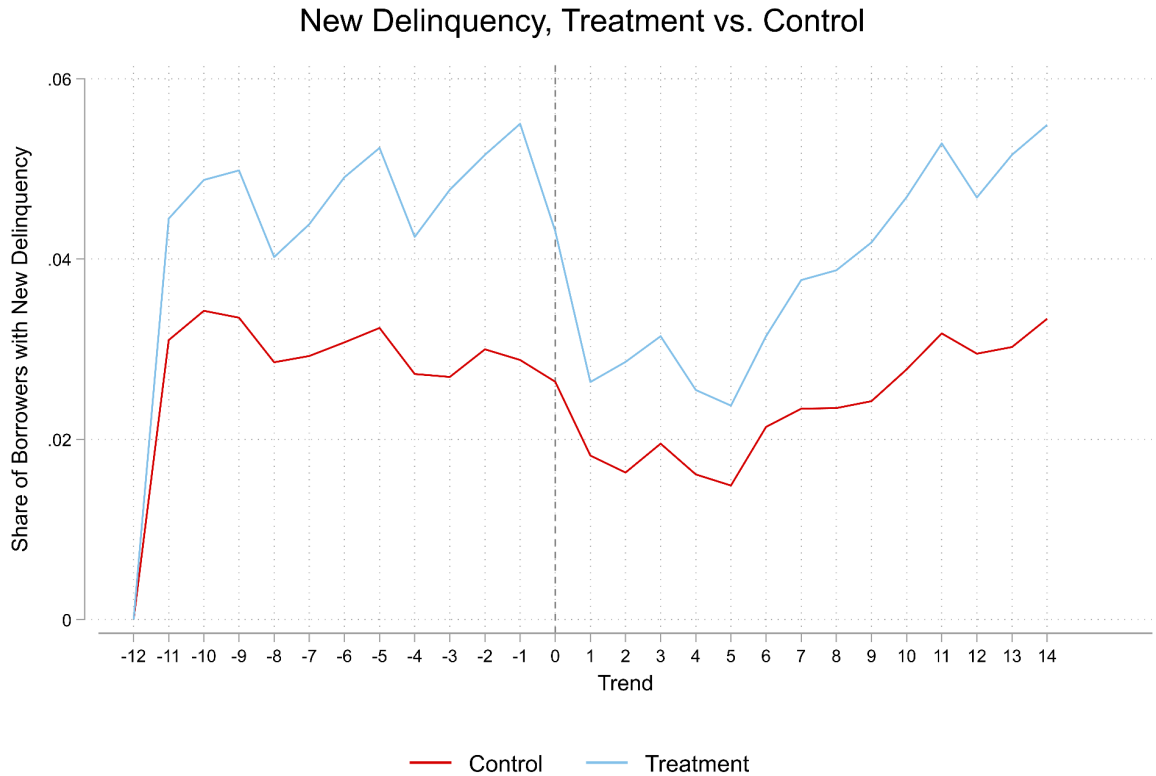


Figure 3 – Estimates for New Delinquencies



The findings are interesting in several respects. First, treated individuals (those affected by the repayment pause) are evidently economically worse-off ex ante than control units, indicating that at some level, the California student borrowers who benefited from the pause were a negatively-selected sample of student borrowers—likely because they continued to hold more student debt longer into their economic life cycles than borrowers who did not benefit, which in turn indicates that they enrolled in higher education more recently, when tuition was higher.⁵¹ Hence, the criticism of the repayment pause to the effect that it benefited borrowers with more debt, who are also those who had more education, and was therefore “poorly targeted,” is likely without merit.⁵²

Second, both treatment and control borrowers saw substantial improvements in their economic wellbeing at the onset of the repayment pause. This is consistent with more general studies of the effect of pandemic-era policy interventions: anomalously for an economic downturn, the population’s economic status broadly improved thanks to the availability of more generous social programs, specifically those like the repayment pause that were not conditional on supplying market labor.

⁵¹ Sérgio Pinto and Marshall Steinbaum, “The Long-Run Impact of the Great Recession on Student Debt,” *Labour Economics* 85, no. 102449 (December 2023), https://marshallsteinbaum.org/assets/pinto_steinbaum_full_article_accepted_9-2023.pdf.

⁵² Sarah Turner, “Student Loan Pause Has Benefitted Affluent Borrowers the Most, Others May Struggle When Payments Resume,” *Brookings Institution* (blog), April 13, 2023, <https://www.brookings.edu/articles/student-loan-pause-has-benefitted-affluent-borrowers-the-most-others-may-struggle-when-payments-resume/>.

Finally, what the difference-in-differences methodology permits us to do is compare the outcomes of pause-affected borrowers to a valid counterfactual. In that sense, it lets us uncover the effect of the repayment pause amid everything else that was going on in the economy at the time, and that shows that the repayment pause (1) narrowed the homeownership gap between relatively advantaged and disadvantaged borrowers, and (2) reduced the likelihood of loan delinquency more for affected borrowers than for unaffected borrowers. The implication of both of these findings is that student loan payments were burdening borrowers in repayment ex-ante and while the pause was temporarily in effect, that burden was lifted.

III. Qualitative Interviews on Effects of the Payment Pause and Public Service Loan Forgiveness (PSLF) Waiver

Our research included interviews constituting an expansion of a groundbreaking explanatory, mixed methods study focused on PSLF borrowers conducted by Daniel A. Collier and others.⁵³ For this subset of data, we focused on California PSLF borrowers only. As part of the larger study, 104 participants were interviewed between July and September 2023, including 9 from California. From May to June 2024, we contacted the remaining individuals from California who had expressed interest in being interviewed, resulting in 11 additional interviews. This brought the total number of participants from California to 19.

The California participants took part in a semi-structured interview which lasted between 30-60 minutes. The interview protocol covered educational experience, understanding of student loan debt, borrower interactions with service providers, overall wellbeing, and relevant to these findings, questions about the payment pause and experiences with PSLF. To ensure confidentiality, during the interviews, participants were asked to choose a pseudonym, which we use below. Each interview transcript was cleaned and uploaded to MAXQD, a coding software, for analysis. Inductive coding and thematic analysis were used to analyze this subset of data.⁵⁴

Of the 19 participants, twelve identified as female and seven as male. Three participants had their loans canceled under the updated PSLF waiver. In terms of employment, eight worked in education, seven at 501(c)(3) organizations, and four in state or local government. All interviewees held advanced degrees. In addition, seven of the participants reported federal loan balances exceeding \$100,000.

A. The Student Loan Payment Pause

In this section, we explore the effects of the payment pause on people enrolled in the PSLF in the state of California. The experiences described by those interviewed are consistent with the quantitative empirical work completed by members of this group and others, and both bolster and provide texture to those findings.

Prior to the pause, many of the people we spoke to had monthly student loan payments exceeding \$500, with some as high as \$1700. For people like Marie, a 34 year old mother who works at a non-profit focused on child welfare, the pause was “a godsend,” making the

⁵³ Collier et al.

⁵⁴ JOHNNY SALDAÑA, THE CODING MANUAL FOR QUALITATIVE RESEARCHERS (3rd ed. 2016), Virginia Braun & Victoria Clarke, *Thematic analysis*, in 2 APA HANDBOOK OF RESEARCH METHODS IN PSYCHOLOGY RESEARCH DESIGNS: QUANTITATIVE, QUALITATIVE, NEUROPSYCHOLOGICAL, AND BIOLOGICAL, 57-71 (Harris Cooper et al. eds., 2012)

difference in being able to afford basic necessities: “[W]e wouldn’t have been able to probably make ends meet without it. I mean it was food, it was rent.” Mary, a 48-year-old single mother and social worker, said the policy provided “breathing room,” explaining that with her small salary from the non-profit where she worked, she was “always falling behind” and was usually in a “situation where you’re trying to rob Peter to pay Paul.” Jada, a 35-year-old mother and professor, echoed this sentiment, stating that the pause “was like everything, honestly.” Odell, 42, parent, and lecturer, went as far as to note that “the pause was awesome like that was the best thing that ever happened in my life, like hands down,” comparing it to both his wedding and the birth of his child.

Below, we highlight key findings that emerged from our interviews, illustrating how the pause allowed these PSLF participants to start families, build their savings, pay down other debt, and reduce mental distress.

1. Family Planning

A number of people interviewed indicated that the pause provided them with the much-desired financial flexibility to start a family. Jada commented that “the extra money that I saved for...like 3 years [during the pause], basically was like critical in me having comfort in starting a family.” For some couples, not having to make monthly student loan payments prompted conversations about family planning. Ann, a 35-year-old mother of one child, commented, “I think like the sense of like financial ease meant that we like started that conversation. And then we’re like, okay, I think we’re ready.” This financial flexibility allowed Celestine, 40, a city planner, to pursue fertility treatments, she noted: “[T]here’s no way we could have done [fertility treatments] if I hadn’t had the student loans paused because I was making like \$900 payments a month or something. And so suddenly I was able to use that money for the fertility treatments.”

2. Increased Savings

The pause also enabled almost all participants to build their savings. Erika, 39, a government planner and mother, mentioned that they were “actually able to save money,” while Kevin, 35, a local government employee, said that “just like having like emergency savings was huge.” Jade, a 39-year-old mother, commented that “at the time it was just nice to be able to have that additional income that we put in savings... it was just an additional, both of us have student loans, so we were saving money, keeping that aside and just making sure that like, if anything were to happen, if either of us lost a job, if anyone got sick we would have those funds.” Marie decided to use the extra funds to catch up on retirement contributions, wanting to set herself up “for retirement better.”

The combination of the pause and remote work even allowed Jake to save enough money to move to L.A. to be with his husband after living apart for more than a decade. With the money they saved from the pause, they were able to “put that in the bank for the size of down payment which you need here in California,” eventually having enough to purchase their first house in January 2022.

3. Paying Down Other Debt

Not having to make student loan payments also freed up funds for some participants to tackle other outstanding debts. Jay, a 36-year-old school psychologist, noted that “because we were not having to make payments, so that was freeing up money for me to pay down other forms of

debt.” Mary and Cecila echoed this sentiment, Mary shared that she “actually was able to pay off my credit card,” while Cecila explained that she was able to “finally pay off credit card debt.”

4. Mental Wellbeing

The pause alleviated mental distress for all of the people we interviewed. Alex, a 29-year-old therapist, noting that the temporary relief from monthly payment obligations contributed to “just like a general decrease in stress.” Odell explained that during the pause there were “fewer worries like I was not worrying about money the way that I worried about money.” Jay similarly explained that the pause meant “just one less thing to worry about during this time of uncertainty.” This was especially true for Ann who described the comfort of the pause when her partner was laid off during COVID: “it was so comforting and nice to just have one less big expense going out the door. It felt, I mean again, because of my husband's job, like just having a little bit of extra cushion was really helpful...it was like one less stressor to add to that time, and one like tiny signal that like somebody out there is like thinking about people and what they need in this moment.”

For some participants, the relief was tremendous. Jada explained: “I would say, honestly, financial burden is like one of the highest stressors in my life even now and it was just, I mean, I can't even tell you how much of a relief it was to not at least have that part to worry about.” Eugena, a 61 year old who has been paying student loans since 1979, commented that the pause “was just such a relief,” explaining “imagine feeling like you're walking around with a, you know, two-story house on your back all the time and trying to do your daily stuff. It felt like that had just been lifted, like I could think in other ways.”

In addition to allowing people to consider family planning, save money, reduce other debts, and relieve mental distress, the pause also enabled some participants to afford meaningful life experiences and make needed investments, such as house repairs. For example, the pause allowed Ann and her husband to take their son overseas to show him where his father's family was from and introduce him to extended family. Additionally, a few interviewees were able to use the money saved during the pause to make home repairs, such as fixing a stove and repairing a leaky roof. Overall, the payment pause provided financial and mental relief for the California PSLF borrowers we spoke to.

B. The PSLF Waiver: Updates to PSLF Eligibility Requirements

The updates to the PSLF eligibility requirements (e.g., payment plan restrictions) resulted in wider eligibility for cancellation of indebtedness for borrowers. ED essentially made PSLF relief available to borrowers whose record of payments had not previously qualified for it. The move constituted recognition that PSLF eligibility requirements had previously operated too stringently, denying cancellation to borrowers who had worked in public interest for the requisite ten-year period but who for some often highly technical reason, such as nature of the repayment plan, had not satisfied a requirement related to the number and nature of payments made.

Three of the people we interviewed had their loans canceled due to these PSLF eligibility updates. Cancellation allowed them the financial room to make large purchases and catch up on savings. Ann shared that she and her partner had been sharing a car and after her loans were canceled, they “could actually afford a second car payment,” feeling more comfortable with the additional cost knowing that she would not have to make monthly student loan payments. Ali, whose loans were canceled, described something similar, noting that, “it opened up

avenues for me to begin to take care of some things I had not been able to because of that student loan debt,” including saving for college education for her children and catching up on retirement savings. Both Ali and Ann achieved their tenth years of public service under the updated waiver.

The updates to the eligibility requirements allowed Odell to have his loans canceled. He said that he “had lost faith that it [his student loans] would ever be forgiven,” explaining that six years into the program, he realized the way he consolidated his loans had rendered him ineligible for PSLF. When the updated waiver counted those years, his loans were canceled. He was then able to help his family, explaining “we were able to buy vehicles, like my mom trashed her car and I was able to give her my car and buy a new car.” In addition to helping his mother, Odell’s canceled loans allowed his wife to go back to school: “I turned to my wife, and I was like, quit your job, go back to school, get your masters, and let’s be like a power couple... let’s put ourselves in a position to where instead of doing servitude for our community, we can do service to our community.”

Overall, both the payment pause and the PSLF waiver implemented during the COVID-19 pandemic made a significant difference on borrowers’ lives.

IV. Institution-level responses to Federal Aid

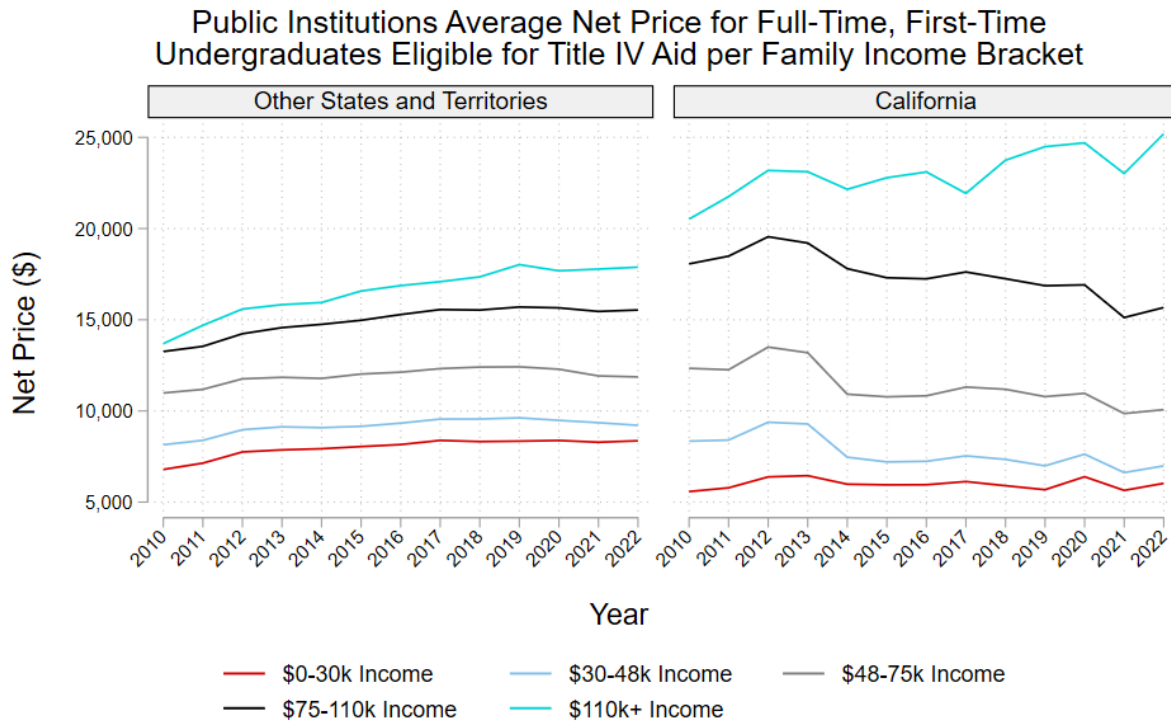
As discussed in Part I, pandemic-era federal appropriations for higher education afforded significant leeway in how funds were disbursed both to state governments and educational institutions. We used data from the Integrated Postsecondary Education Data System (IPEDS) to document both state- and institutional variation in financial aid over the academic years when this funding was disbursed. That analysis indicates that California public institutions dedicated funds disproportionately to defraying the cost of tuition and may therefore have contributed to maintaining enrollment rates, while institutions in other states suffered considerable declines.⁵⁵

IPEDS reports net price paid broken out by family income for first-time/full-time, dependent students who received Title IV federal aid, which refers to Pell Grants, work-study funding, and direct student loans. Net price means the tuition charged after institutional financial aid is taken into account. We aggregate over institutions (of various types) within a state to compute an estimate of net price by family income, understanding that the focus on first-time, full-time students can mislead since institutions regularly reduce financial aid awards after students have enrolled and are locked-in.⁵⁶

⁵⁵ Education Department, Digest of Education Statistics, tbl. 304.10 (“Total fall enrollment in degree-granting postsecondary institutions, by state or jurisdiction: Selected years, 1970 through 2022”), https://nces.ed.gov/programs/digest/d23/tables/dt23_304.10.asp?current=yes.

⁵⁶ Laura Beamer, “How Schools Lie” (Jain Family Institute, September 1, 2021), <https://www.phenomenalworld.org/analysis/how-schools-lie/>.

Figure 4 – Average Net Price for Full-Time, First-Time Undergraduates Eligible for Title IV Aid per Family Income Bracket, Public Institutions only.

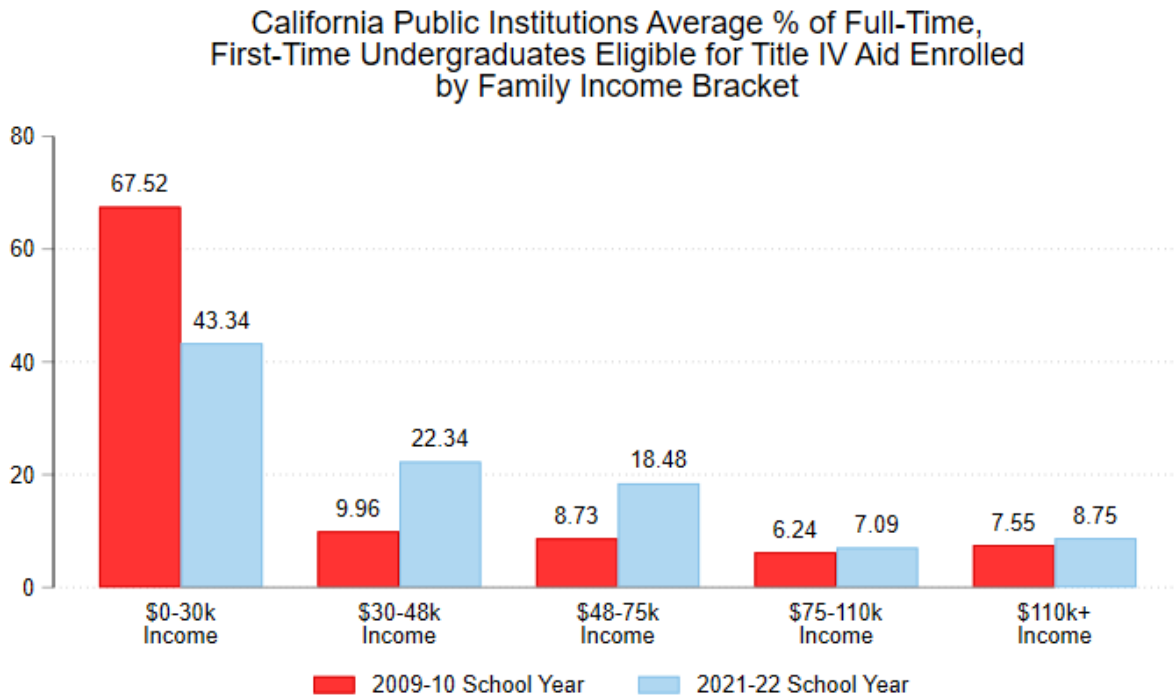


Graphs By: Region

This contrast between pricing at public institutions in California and that at institutions in all other states reveals several interesting policy differences. First, tuition is more progressive in California than elsewhere: students from higher-income backgrounds pay higher prices and students from lower-income backgrounds pay lower ones. In this respect, California is leading the trend, at least among state flagship institutions.⁵⁷ This is also notable because slightly more students received Title IV aid in 2021 than was the case in 2009 (not depicted in the chart), about half of all undergraduate students enrolled in California public institutions. That share is about average across states, but the fact that it has not declined since 2009 indicates public institutions in California remain more accessible to lower-income students than the general trend in US higher education, where enrollment declines are particularly concentrated among lower-income students. On the other hand, as in most states, the share of California undergraduates at public institutions with higher income backgrounds has increased, notwithstanding the progressive tuition policy.

⁵⁷ Emily E. Cook and Sarah Turner, "Progressivity of Pricing at US Public Universities," *Economics of Education Review* 88, no. 102239 (2022), <https://www.nber.org/papers/w29829>.

Figure 5 – California Publics Average Percent of Full-Time, First Time Undergraduates Eligible for Title IV Aid Enrolled by Family Income Bracket



47.38% of full-time, first-time degree seeking undergraduates at California received Title IV aid in 2009-10. 47.78% received aid in 2021-22.

Second, and more relevant for this analysis, net prices dropped for students in all parental income brackets during the pandemic in California relative to other states (visible in the decline in net price in 2021 relative to 2020). This contrast indicates that California allocated relatively more pandemic assistance to defraying the cost of attendance. We continue to investigate the effects of this differential policy of financial aid on (1) enrollment during and after the pandemic and (2) origination and repayment of student loans.

VI. Conclusion

The federal government’s interventions during the COVID-19 pandemic, particularly the student loan repayment pause and adjustments to the Public Service Loan Forgiveness program, provided significant relief to borrowers. The historically radical moves demonstrate the potential for policy to alleviate the burden of student debt. These measures resulted in tangible benefits, such as improved financial stability, increased savings, improved mental health, and enhanced well-being for many borrowers. However, as these relief measures end and student debt payment obligations resume, the financial pressures on borrowers will intensify, potentially exacerbated for those borrowers who took on new debts during the pause. This should raise concerns about the long-term financial precarity of student borrowers and highlights the need for continued attention to and reform of student loan policies to promote positive outcomes for those who must borrow to pay for higher education.