ARCC NETWORK
ACCELERATING RECOVERY IN COMMUNITY COLLEGES

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Labor Market Opportunities and Declining Community College Enrollment in the Pandemic Era

The Picture in Los Angeles County

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Since the onset of COVID-19, community college enrollments have declined substantially across the U.S. and remain depressed. Estimates from the National Student Clearinghouse suggest that for-credit enrollment at public two-year colleges was down nearly 20% in Spring 2023 compared to Spring 2019 (Berg et al., 2023). In the California Community Colleges (CCC) system, the largest system of public two-year colleges in the nation, for-credit enrollment was down more than 14% over the same period. Los Angeles County accounts for more enrollment in the CCC system than any other county in California, before and since the pandemic. The county has also experienced a higher loss of for-credit enrollment—approximately 17%—than the overall CCC system between Spring 2019 and Spring 2023.[1] Given the returns to credits and credentials offered by community colleges (Jepsen et al., 2014; Liu et al., 2014; Bahr, 2019; Mountjoy, 2022), not enrolling can have significant consequences for students. In states like California that base higher education funding on enrollment, declining headcounts can likewise be consequential for institutions. Understanding the reasons for enrollment decline is therefore important.

One hypothesis of CCC administrators is that students are forgoing postsecondary education to take advantage of job opportunities that have improved since the pandemic (Echelman, 2023). In this brief, we explore this hypothesis in the context of Los Angeles County. To assess local labor market conditions, we use data from the Quarterly Workforce Indicators (QWI) and the American Community Survey (ACS).[2] We find that changes in Los Angeles County in the labor market and in the working-age population can plausibly explain some of the enrollment decline at the county's CCC campuses. Average labor earnings are significantly higher

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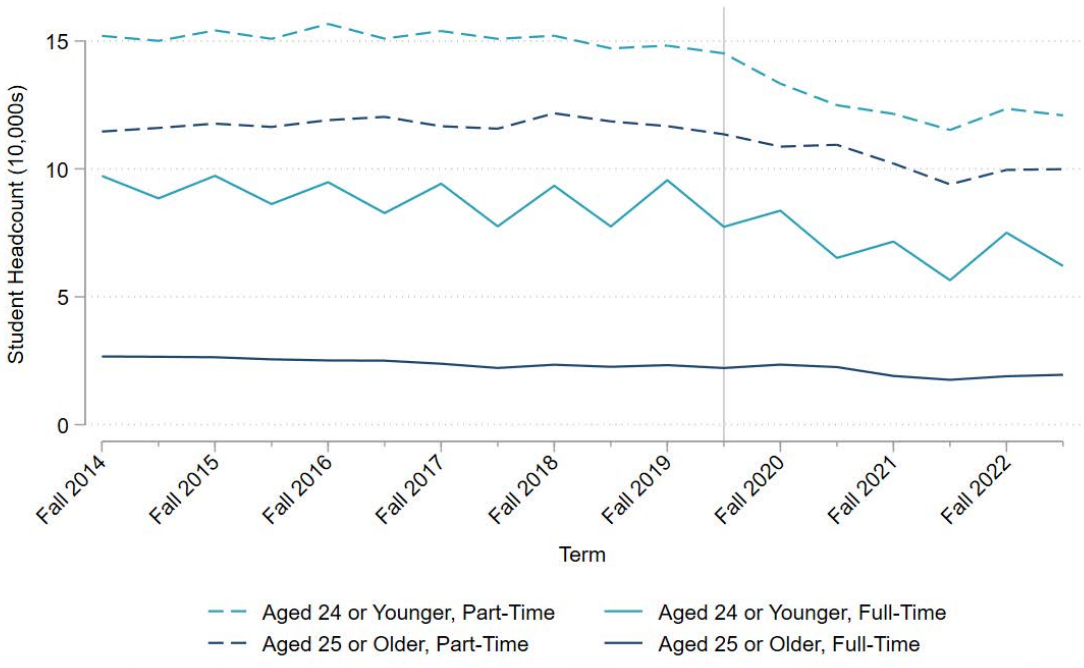
than before the pandemic, even after adjusting for inflation. Time spent in school and not working therefore is more costly to students, which might dissuade enrollment. A slightly higher proportion of the population is in the labor force for residents younger than 25 and residents 25 or older with some college education. If people previously not in the labor force were using their time to pursue postsecondary education, the shift towards participation in the labor force might come at the expense of those educational pursuits. Finally, the number of working-age residents in Los Angeles County has declined for all but the highest level of educational attainment. Fewer people in the county with less than a bachelor's degree likely means a smaller pool of potential community college enrollees. In the sections that follow, we explore these findings in more detail.

Community College Enrollment Losses in Los Angeles County

There are 22 community colleges in 12 districts in Los Angeles County, of the 116 total campuses in 73 districts that comprise the CCC system. Since the onset of the pandemic, for-credit enrollment at these 22 campuses has declined substantially, but as shown in Figure 1, that decline has not been distributed evenly across student age bands or enrollment intensities. Across age groups, full-time enrollment dropped the most, declining nearly 21% between Fall 2019 and Fall 2022. Part-time enrollment declined approximately 16% over the same period. Across credit load intensities, younger students—those age 24 and under—have experienced the greatest enrollment decline, dropping by more than 18% from Fall 2019 through Fall 2022. Enrollment among students age 25 and up declined by approximately 15% over this period. The age-intensity group with the largest decline from Fall 2019 to Fall 2022 was younger, full-time students: headcount dropped by more than 21%. Enrollment dropped least among older, part-time students: headcount in this group dropped by less than 15% over the same period.

For further insight into community college enrollment trends in Los Angeles County, see the related Accelerating Recovery in Community Colleges Network brief "Regaining Ground." This brief explores pandemic-era changes in enrollment in the Los Angeles Community College District, the largest CCC district in the county. Student types with the largest enrollment losses included continuing students and those receiving financial aid. Though enrollments in the district have rebounded slightly since pandemic lows, that recovery has been uneven across student types.

Figure 1: CCC For-Credit Enrollment by Age and Enrollment Intensity in Los Angeles County



Note: Enrollment data come from the CCC Chancellor's Office. Only Fall and Spring terms are included in this plot; Summer and Winter terms are excluded due to lower enrollment. Full-time enrollment is defined as taking 12 or more credits in a term.

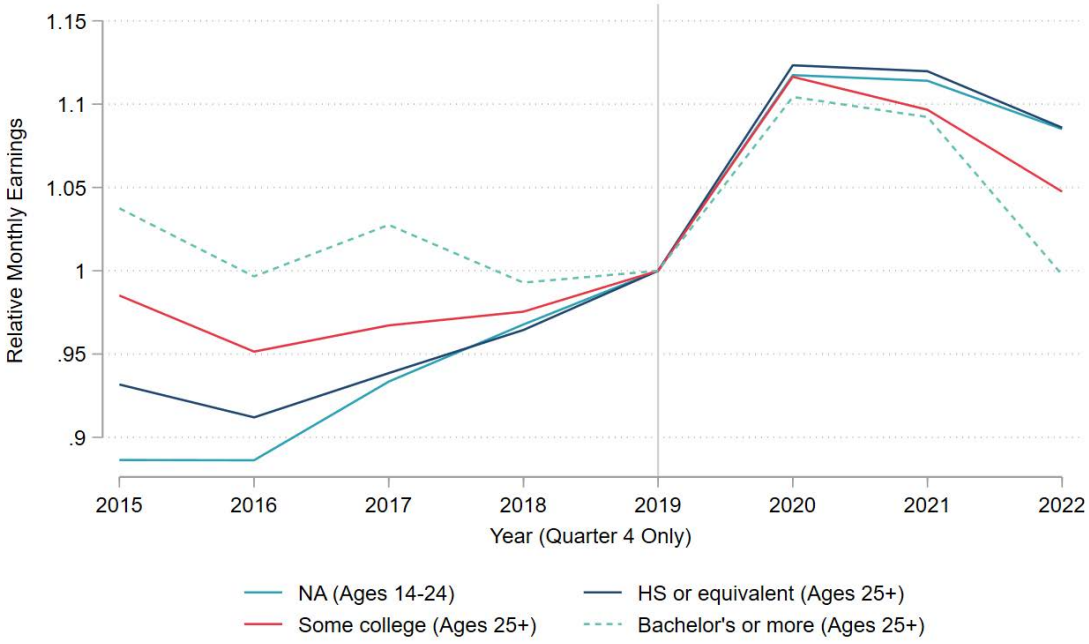
Labor Earnings

One potential labor market explanation for declining community college enrollment is that earnings potential has grown since the onset of COVID-19. If the amount of money that a person can earn by working rises, then time spent in school and not working comes at a higher cost of more foregone earnings. The cost of foregone earnings while in school is known as an "opportunity cost." Potential students might respond to rising opportunity costs by deciding not to enroll in community college.

Figure 2 shows average monthly labor earnings by educational attainment in Quarter 4, relative to Quarter 4 in 2019, just before the pandemic began. These relative earnings can be interpreted as ratios. For example, relative labor earnings of 1 are the same as earnings in 2019 Quarter 4. Relative earnings of 1.1 are 10% higher than 2019 Quarter 4 while relative earnings of 0.9 are 10% lower. Educational attainment is unavailable for workers younger than 25.[3] For these younger workers and workers age 25 and older with less than a four-year degree, Quarter 4 is most often the period with the highest average earnings.[4] Since COVID-19, the same seasonal pattern has generally held, with earnings highest at the end of the year, but the relative level of those earnings spiked considerably. In Quarter 4 in each of 2020 and 2021, younger workers and workers 25 and up with less than a bachelor's degree were making 10% or more compared to Quarter 4 in 2019, even after adjusting for inflation. These large

earnings gains in Quarter 4 helped to drive large average earnings gains across full-year periods. In 2021, average monthly earnings were 8–10% higher for younger workers and those with less than a bachelor's degree compared to all of 2019. Together, these findings show large gains in earning potential for the populations most likely to enroll in community college: younger people and those with less than a four-year degree. Workers who might have considered enrolling at a CCC campus before the pandemic may now be choosing to forgo school entirely in favor of employment, to take advantage of this new earnings potential.[5]

Figure 2: Average Monthly Labor Earnings in Quarter 4, Relative to 2019 Quarter 4, by Educational Attainment in Los Angeles County

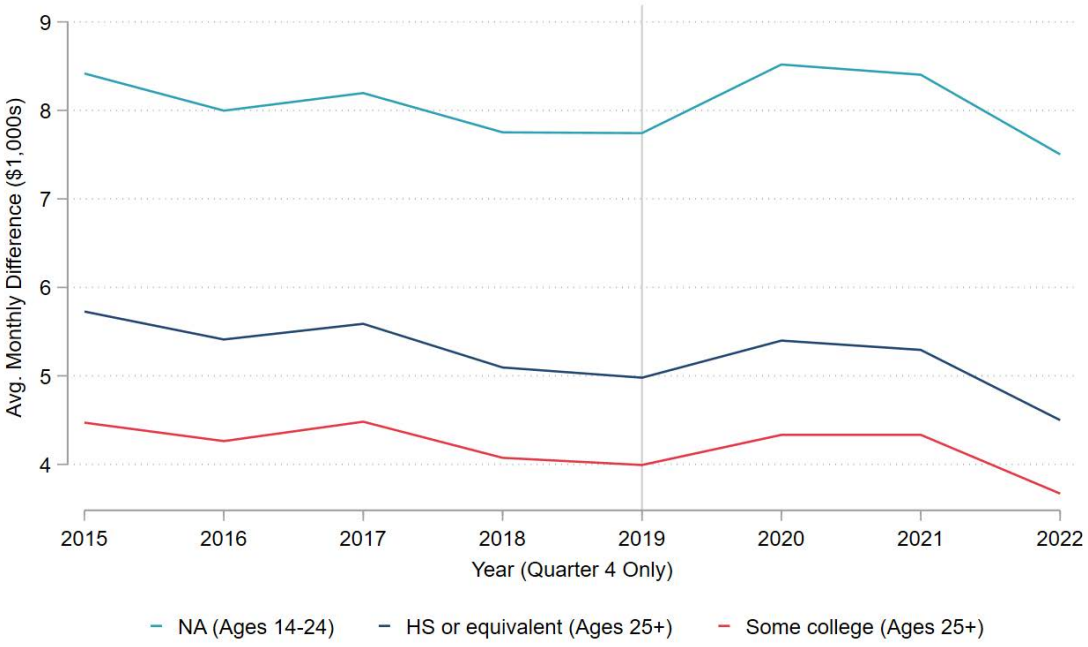


Note: Quarterly Workforce Indicators (QWI) data. Relative earnings are computed in constant dollars. Earnings include wages, salaries, bonuses, stock options, tips, and other gratuities, for workers who remained at a job for the entire quarter. Educational attainment for workers younger than 25 is not available.

Another potential labor market factor that could dissuade students from enrolling in community college is a decline in the payoff to additional schooling. Education can raise the productive capacities of workers, leading to higher future earnings (Deming, 2022). If the earnings premium for more education shrinks, then this means a lower return to educational investment. More students may decide that further schooling is not worthwhile. Figure 3 plots the difference in average monthly labor earnings in Quarter 4 for workers with a bachelor's degree or more over the average monthly earnings for young workers and workers with less educational attainment. The earnings gaps between the most educated workers and the rest of the labor force in Los Angeles County were shrinking in the years preceding the pandemic, similar to national patterns (Aeppli & Wilmers, 2022). But in 2020 and 2021, those

earnings gaps increased, before declining again in 2022. Given this evidence, it is not clear that community college enrollment losses in the pandemic era are due to a declining return to education.[6]

Figure 3: Average Monthly Earnings Advantage (Quarter 4) of Workers with a Bachelor's Degree or More Over Sub-Baccalaureate Workers in Los Angeles County

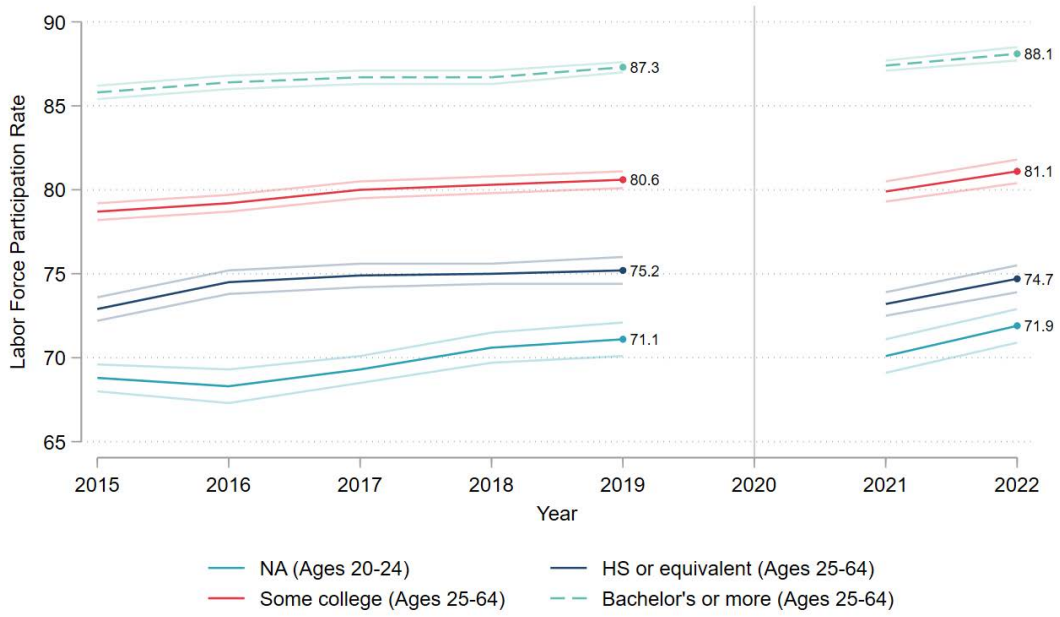


Note: Quarterly Workforce Indicators (QWI) data. Earnings are reported here in 2022 dollars. Earnings include wages, salaries, bonuses, stock options, tips, and other gratuities, for workers who remained at a job for the entire quarter. Educational attainment for workers younger than 25 is not available.

Labor Force Participation and Unemployment

Another possible explanation for declining community college enrollment is that the labor force participation rate (LFPR) has increased.[7] With only so many hours in a day, a person joining the labor force might have less time for educational pursuits. Rising labor earnings, like those observed in Figure 2, might be one reason why a person previously not working might decide to seek employment. Figure 4 shows the LFPR in Los Angeles County for different levels of educational attainment.[8] The data suggest that between 2019 and 2022, the LFPR for workers 25 and older with a high school education declined slightly. But for younger workers and for workers 25 and older with some college education, the LFPR increased.[9] The rising LFPR for younger workers may be especially significant. Most of the for-credit enrollment at CCC campuses in Los Angeles County is made up of students younger than 25, so any shift towards the workforce among this age range could have consequential implications for CCC headcounts.

Figure 4: Labor Force Participation Rate (LFPR) by Educational Attainment in Los Angeles County

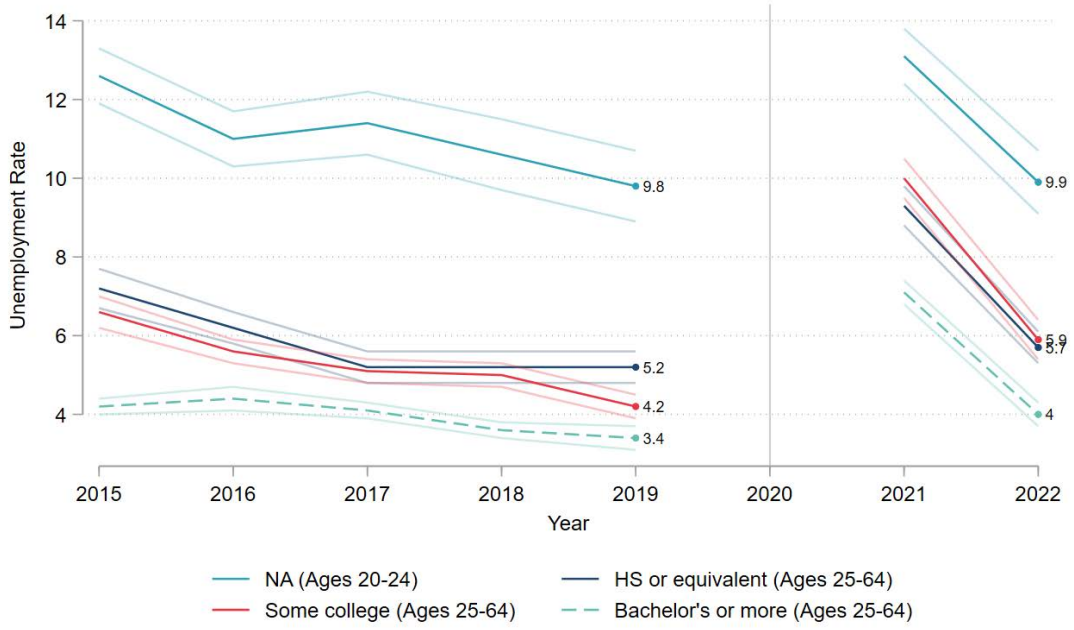


Note: Data come from the American Community Survey (ACS) 1-Year Estimates. Data for 2020 are unavailable. Educational attainment for people younger than 25 is not available. The LFPR for people ages 16-19 is omitted because it is significantly lower than any other group shown. Lighter error lines represent a 90% confidence interval for each sampling estimate.

Just because a person joins the labor force does not mean that person immediately finds a job. While searching for employment, some newly aspiring workers may spend time unemployed. Other workers who had been employed may become unemployed. The unemployment rate is another important measure of labor market conditions that complements the LFPR by describing the proportion of the labor force that is unemployed. When the unemployment rate is low, it means there are few workers seeking jobs without being able to find one, so a declining unemployment rate is another way to measure improving labor market opportunity that might draw away potential community college students.

Figure 5 shows the unemployment rate in Los Angeles County for different levels of educational attainment. Among the youngest workers, age 16–19, the unemployment rate declined slightly between 2019 and 2022.[10] Over the same period, the unemployment rates for workers 25 and older with a high school education or some college appear to have increased slightly. For younger workers age 20–24, the unemployment rate appears to have changed little. If potential community college students were being diverted primarily by newfound ease of finding jobs, we might expect to find consistently lower unemployment rates since the onset of COVID-19. This is not what we see in the data.

Figure 5: Unemployment Rate by Educational Attainment in Los Angeles County

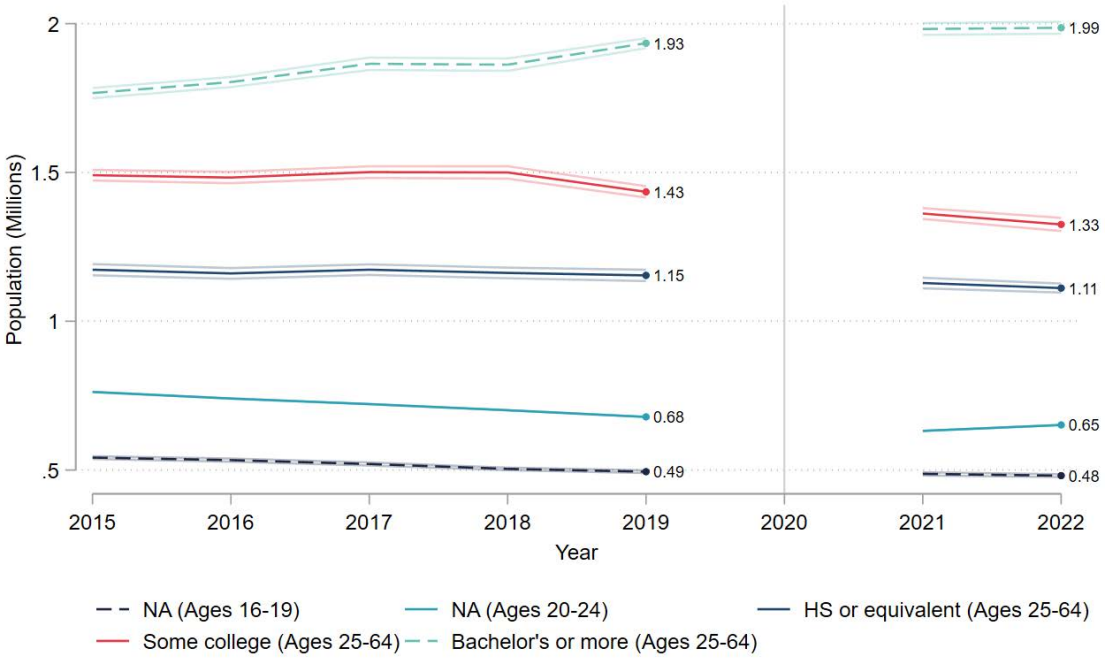


Note: Data come from the American Community Survey (ACS) 1-Year Estimates. Data for 2020 are unavailable. Educational attainment for workers younger than 25 is not available. The UR for people ages 16-19 is omitted because it is significantly higher than any other group shown. Lighter error lines represent a 90% confidence interval for each sampling estimate.

Working-Age Population Changes

Another possible explanation for declining community college enrollment is simply that the pool of county residents who might enroll in community college has declined. We explore this possibility by examining the working-age (age 16–64) population in Los Angeles County. This population represents the bulk of for-credit community college enrollment in the county as well as the age range in which people are most likely deciding between employment and enrollment. Figure 6 shows that the number of younger working-age residents has declined since 2019, as has the number of residents aged 25-64 with less than a bachelor's degree. Since younger people and those without a bachelor's degree are more likely to enroll in community college, this loss of population might help explain declining headcounts at the county's CCC campuses.

Figure 6: Working-Age Population by Educational Attainment in Los Angeles County



Note: Data come from the American Community Survey (ACS) 1-Year Estimates. Data for 2020 are unavailable. Educational attainment for people younger than 25 is not available. Lighter error lines represent a 90% confidence interval for each sampling estimate.

Conclusion

With the onset of the pandemic, for-credit enrollment at Los Angeles County's CCC campuses declined substantially. Labor market conditions in the county might be one explanation for why the number of students dropped. Earnings potential for younger workers and those with less than a bachelor's degree has increased significantly since the onset of COVID-19. In response, potential students might be working more and attending school less often. A higher rate of the population age 24 and younger as well as 25 and older with some college is participating in the labor force. With finite time each day, joining the labor force might come at the cost of time available for educational pursuits. Finally, except for people 25 and older with a bachelor's degree or more, the working-age population of Los Angeles County has declined since the pandemic. Fewer younger residents and fewer residents with less than a four-year degree might be additional factors contributing to declining CCC headcounts.

If labor market and population dynamics explain some of the enrollment loss, the picture is complex. Some labor market indicators have not changed in the direction we might have expected if enrollment loss were primarily due to students diverted to work instead of school. We do not find evidence that the return to postsecondary education has consistently declined in the

county since the pandemic. A declining return on investment in education might have discouraged some potential students from enrolling. We also find that the unemployment rate appears slightly higher between 2019 and 2022 for workers 25 and older with a high school education or some college and unchanged for workers age 20–24. If job opportunities were the primary reason potential students declined to enroll in community college, we might expect the unemployment rate, a measure of those opportunities, to be lower for these groups of workers.

The changes in earnings, employment opportunities, and population presented here represent one facet of a complex environment individuals must navigate when deciding whether to enroll in community college. We cannot determine with certainty the extent to which any of the factors explored in this brief caused fewer students to pursue postsecondary education. Other factors unrelated to the labor market or working-age population might explain some of the loss, like changes in the modality of course offerings or increases in family caregiving obligations. By continuing to examine the range of factors shaping enrollment, institutional and system leaders will be able to better engage and support potential enrollees to reach their academic and professional goals.

Endnotes

1. In this brief, we focus on for-credit enrollment, which has a natural partition: full-time enrollment and part-time enrollment. In the CCC system, the threshold for full-time enrollment is 12 credits taken in a term. The CCC system offers non-credit courses, but these courses tend to be only a small proportion of total enrollment and are offered for unique purposes (e.g., civics education and English as a Second Language).
2. The Quarterly Workforce Indicators (QWI) data include measures of worker earnings. We refer to these earnings as labor earnings to distinguish employment compensation from other kinds of earnings (e.g., investment returns from the stock market). Labor earnings include any type of compensation on which an employer has paid Unemployment Insurance (UI) tax, including wages, salaries, bonuses, gratuities, tips, and stock options. We focus specifically on the earnings of "stable" employees, or workers who remained at an employer for an entire quarter. The American Community Survey (ACS) includes measures that complement the QWI data, including labor force participation rates, unemployment rates, and population.
3. Both the QWI and ACS data share a key limitation: educational attainment is not available, or "NA", for people younger than 25. In the QWI, this NA group includes people age 14–24. In the ACS, this group includes age 16–24. Interpreting the QWI labor earnings data for workers younger than 25 can be especially challenging. Educational attainment in this group can range between having a master's degree to still being in high school. If many workers in this group are simultaneously going to school and working part-time, work intensity may also explain part of the lower average earnings of this group.
4. This seasonal pattern makes sense if employers offer special compensation in Quarter 4, like year-end bonuses.
5. One alternative explanation of higher labor earnings is that people are working more, rather than wages growing. We believe higher wages since the pandemic is the main story for two reasons. First, the QWI data shown here average earnings across jobs. This means that a worker deciding to take on additional jobs should have less influence on the average earnings numbers used here. Second, other federal data sources, including the Current Population Survey (CPS) Monthly data for California, do not appear to show workers significantly increasing work hours since the onset of the pandemic.
6. If workers with different levels of educational attainment differ in other ways, like ability, then the earnings gaps shown here reflect more than the monthly earnings premiums for further education.
7. The labor force participation rate (LFPR) describes the proportion of the population in the labor force. To be considered in the labor force, a person must be either employed or looking for work.
8. Unlike the QWI data, the ACS data are based on surveys that randomly sample households from among a larger population of households. Not every household is selected to receive an ACS survey in any given year. If we randomly selected a different subset of households in the same year, we would likely get similar —but not identical—responses compared to the subset we actually selected. As a result, estimates from the ACS, like the LFPR, have what is called "sampling error." The lighter sampling error lines in Figures 4–6 represent this uncertainty due to sampling. Let us define the true value of the LFPR as the value we get when all households are sampled. If we repeat the sampling process 100 times in a given year, that true value of the LFPR would fall between the error lines 90 out of those 100 times.
9. The LFPR increased for workers age 16–19, as it did for workers age 20–24. We do not plot the LFPR for age 16–19 because of readability issues: LFPR for this age range is much lower than for other worker groups.
10. The unemployment rate for workers age 16–19 is omitted from Figure 5 for readability: The unemployment rate in this age range is much higher compared to the other worker groups.

References

Aeppli, C., & Wilmers, N. (2022). Rapid wage growth at the bottom has offset rising US inequality. *Proceedings of the National Academy of Sciences* (*PNAS*),*119*(42), e2204305119. https://doi.org/10.1073/pnas.2204305119

Bahr, P. (2019). The labor market returns to a community college education for noncompleting students. *The Journal of Higher Education* , *90*(2), 210–243. https://doi.org/10.1080/00221546.2018.1486656

Berg, B., Lee, S., Randolph, B., Ryu, M., & Shapiro, D. (2023).*Current term enrollment estimates: Spring 2023* . National Student Clearinghouse Research Center. https://nscresearchcenter.org/wp-content/uploads/CTEE_Report_Spring_2023.pdf

Betts, J., & McFarland, L. (1995). Safe port in a storm: The impact of labor market conditions on community college enrollments.*The Journal of Human Resources* , *(30*)4, 741-765. https://doi.org/10.2307/146230

Deming, D. (2022). Four facts about human capital.*Journal of Economic Perspectives* ,*(36*)3, 75-102. https://doi.org/10.1257/jep.36.3.75

Echelman, A. (2023, September 27). California community college enrollment is up, but one group of students lags behind. *CalMatters* . calmatters.org/education/higher-education/2023/09/community-college-enrollment-3/

Jepsen, C., Troske, K., & Coomes, P. (2014). The labor-market returns to community college degrees, diplomas, and certificates. *Journal of Labor Economics* , *(32*)1, 95-121. http://dx.doi.org/10.1086/671809

Liu, V., Belfield, C., & Trimble, M. (2014). The medium-term labor market returns to community college awards: Evidence from North Carolina. *Economics of Education Review* , *44* , 42–55. https://ccrc.tc.columbia.edu/media/k2/attachments/medium-term-labor-market-return-to-community-college-awards.pdf

Mountjoy, J. (2022). Community colleges and upward mobility.*American Economic Review* ,*(112*)8, 2580–2630. https://doi.org/10.1257/aer.20181756

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