

**The Influence of Financial Aid on Persistence among Adult Students in Riverside**

**Community Colleges**

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### **Abstract**

Adult students represent a growing share of college enrollment, but remain less likely to persist and complete a degree compared to traditional students. This research investigates the relationship between financial aid and term-to-term persistence among adult students (age 25+) enrolled in the Riverside Community College District. Using unbalanced panel data from 22,462 students across four semesters, a logistic regression model estimates the odds of persistence based on four different financial aid. Results show that students who receive financial aid persist significantly more compared to those who do not. However, when analyzing the impact of each type of aid, it reveals the limitations of each and how it influences an adult student's success. These findings are a significant indication of the role public policy has in expanding access to financial aid for these students.

## Introduction

Non-traditional students, also known as adult students, are an important yet often overlooked group when it comes to receiving financial aid in higher education. Nonetheless, research has shown that the student population in higher education has shifted to be more diverse than the traditional 18-22 year old student population (Osam et al., 2017). Adult students are typically older than 25 years old, typically single-parent, have dependents, among other characteristics (MacDonald, 2018). Given the shift in the age groups of students attending higher education, it is essential to understand the needs of adult students, including access to financial aid funds, and how these factors influence persistence, particularly due to the different barriers they face compared to traditional college students. Previous research has shown that adult students encounter distinct challenges when attending college. According to Ellen Fairchild (2003), most challenges arise from situational, dispositional, and institutional barriers. For example, situational obstacles that may influence the persistence of adult students include household income, the number of dependents in the household, and the amount of financial aid received (Fairchild, 2003). Therefore, it is essential to understand and analyze the impact that financial aid has on the overall success of adult students in higher education, particularly in terms of persistence.

Although similar research exists and helps us understand the general needs of adult students, this study will expand on the existing literature by examining the different types of financial aid disbursed in the community colleges of Riverside, California. The research question we explore is: How do the types of financial aid available (Cal Grant, California College Promise Grant (CCPG), Federal Loans, and Pell Grant) influence the odds of persistence among adult students (age 25+) at community colleges in Riverside? Due to the Family Educational Rights

and Privacy Act (FERPA) confidentiality guidelines, our dataset does not reflect all adult student characteristics, including key demographic information that identifies adult students. Therefore, for purposes of this research, adult students will be defined only as those who are at least 25 years old due to the limited demographic information obtained.

The data used for this research was collected from the Riverside Community College District, which includes de-identified student data attending Moreno Valley, Norco, and Riverside City Colleges during the Fall 2022, Spring 2023, Fall 2023, and Spring 2024 terms. Drawing from a dataset that includes 22,462 student observations, the research focuses on financial aid as the primary independent variable, types of financial aid as additional independent variables, and persistence as the dependent variable. The research also controls for factors such as being a woman, being Black, being Hispanic, being enrolled part-time, and being an adult student with dependents. Specifically, to analyze our data, we focused on an empirical analysis that is ideal for binary variables. Given that the data are an unbalanced panel, we employed a logistic regression model to examine the relationship between persistence and types of financial aid. This research reviews the literature on adult students in higher education and their accessibility to financial aid. It also delves into the four main hypotheses, describes the unbalanced panel data, and the analysis strategy. Lastly, the research will discuss the results, limitations, and recommendations for future research.

## **Overview of Higher Education**

### **Financial Aid Policies**

This research will focus on the various types of financial aid that students in the Riverside Community Colleges receive, including the California College Promise Grant (CCPG), Cal Grant, Pell Grant, and Federal Loans. However, it is essential to first understand what each

type of financial aid offers and the eligibility criteria for adult students, as each one may have different impacts on their financial situation and persistence. For example, per the California Community Colleges (CCC), the CCPG “waives student enrollment fees and is designed to ensure that the fee policies of the CCC do not pose a financial barrier to education for any California resident or eligible non-resident” (California Community Colleges, 2025). Essentially, this type of aid is designed to cover the enrollment fees of \$46 per unit. Students must demonstrate a financial need based on their (and their spouse’s, if applicable) income and household size to be eligible for this type of aid. They must also apply by completing a Free Application for Federal Student Aid (FAFSA) or California Dream Act Application (CADAA), “sustain a cumulative GPA of 2.0 or higher, and have a cumulative completion rate of more than 50 percent of the coursework in their attempt. Drops, withdrawals, and failing grades all affect students’ completion rate” (California Community Colleges, 2025).

The Cal Grant is a California-specific financial aid program offered to students and does not require repayment. Students must apply through the FAFSA or CADAA applications by a “specific deadline and meet all eligibility, financial, and minimum GPA requirements” (California Student Aid Commission, 2025). The California Student Aid Commission (CSAC) offers three kinds of Cal Grants - A, B, and C for each of the Cal Grant Programs. Students do not select their preferences; rather, their awards are based on their needs and qualifications, as noted in the FAFSA or CADAA applications. In our case, adult students only qualify for two of the three Cal Grant Programs. The *Cal Grant Community College Entitlement Award* is specifically for students enrolling at a California community college. However, even though adult students can apply and be eligible for the Cal Grant, it is reserved and unavailable until they transfer to a 4-year university. Per CSAC, to qualify for this Cal Grant, students must be

low or middle-income, have a 2.40 college GPA minimum for Cal Grant A, and have a 2.0 college GPA minimum for Cal Grant B. Cal Grant A can only be used for tuition and fees. Cal Grant B only assists with living expenses (CSAC, 2025). Students can only receive one type of Cal Grant at a time, meaning no student receives both Cal Grant A and B in the same school year. Additionally, award amounts vary by academic year. According to CSAC records for the 2021-2022 period, students received awards of up to \$12,000.

The second Cal Grant adult students may qualify for is the *Cal Grant Transfer Entitlement Award*, for “students who plan to transfer directly from a California Community College to a 4-year university” (CSAC, 2025). To qualify, students must maintain a 2.4 GPA minimum, be low to middle income, be under the age of 28 by December 31st of the award year, and must have graduated from a California high school. Similar to the Cal Grant Community College Entitlement Award, this Cal Grant program type has a Cal Grant A, which can only be used for tuition and fees, and a Cal Grant B, which includes annual living expenses. Cal Grants A and B “must be used in a program at least two academic years, resulting in an associate or baccalaureate degree of 48 semester units or the equivalent” (CSAC, 2025).

The Pell Grant is a federal program awarded only to undergraduate students who are seeking an undergraduate degree and have not yet completed it. However, in order to be eligible, they must demonstrate financial need through their FAFSA application (Federal Student Aid, 2025). Students can only receive a Pell Grant award for no more than 12 full-time terms or six years (Federal Student Aid, 2025). The award amount varies each year and is determined by the student's financial need, the school's cost of attendance, and whether the student enrolls full-time or part-time. Per the National Association of Student Financial Aid Administrators (NASFAA), the Pell Grant minimum and maximum award levels are established annually through

congressional appropriations (2023). In the academic year 2022-2023, “the amounts ranged from \$692 to \$6,895. In 2023-2024, the amounts ranged from \$750 to \$7,395” (NAFSAA, 2023).

Lastly, Federal Student Loans are funded by the federal government and must be repaid with interest (Federal Student Aid, 2025). Undergraduate students are eligible for both Direct Subsidized and Unsubsidized loans. The main difference between both loans is that “interest starts accumulating from the date of the first loan disbursement in the Unsubsidized loan, while in the Subsidized loan interest won’t be charged while a student is enrolled in school or during their six-month grace period after the last enrolled term” (Federal Student Aid, 2025). Students are awarded up to \$5,500 in Subsidized loans based on financial need and up to \$20,500 in Unsubsidized loans, depending on their level (Federal Student Aid, 2025).

### **California Higher Education Landscape**

In the context of California's higher education landscape, relatively little academic research has been conducted to analyze the impact of financial aid on the overall persistence of adult students. However, California community colleges, policy institutes, and educational centers often conduct surveys and collect key data on the communities they serve. The California-specific data may give us a glimpse into students' eligibility and accessibility in California and the Riverside area.

It is essential to understand how adult students access financial aid to persist in community colleges. Per the California Student Aid Commission, the total number of FAFSA and CADAA applications submitted by all California community college students starting college in 2023 was 714,139, and in 2024 was 697,599. Similarly, the total number of 25-29-year-old students who submitted applications for all California community colleges was 334,223 in 2023 and 332,039 in 2024. According to the FAFSA and CADAA applications,

Riverside Community College District students submitted 32,383 applications in 2023 (California Student Aid Commission, 2025).

Additionally, per the California Student Aid Commission, in the 2022 - 2023 academic year, 20,538 California Community College students received an *offer* to the Cal Grant A, and 152,349 received an *offer* to Cal Grant B, both for the Transfer Entitlement and the Community College Entitlement Awards. For those who were over twenty-five, only 5,511 students received an *offer* for the Community College Entitlement Awards, Cal Grant A, and 47,503 for Cal Grant B. In the 2023-2024 academic year, 28,568 California Community College students received an *offer* to the Cal Grant A, and 187,905 received an *offer* to Cal Grant B, both for the Transfer Entitlement and the Community College Entitlement Awards. For those who were over twenty-five, only 5,772 students received an *offer* for the Community College Entitlement Awards, Cal Grant A, and 71,920 for Cal Grant B. Compared to the *offered* awards, the total Cal Grant *paid* awards in 2022-2023 were 1,781 for Cal Grant A and 83,967 for Cal Grant B. For those over twenty-five, 1,199 students were *paid* Cal Grant A, and 27,161 were *paid* Cal Grant B. In the 2023-2024 academic year, 2,359 students were *paid* Cal Grant A, and 102,341 were *paid* Cal Grant B. For those over twenty-five, 1,475 students were *paid* Cal Grant A, and 31,361 students were *paid* Cal Grant B.

Regarding adult students, according to CSAC data, those 25 years old and older tend to receive fewer Cal Grants, which are *awarded* and *paid*. This can be due to the eligibility criteria for each of the Cal Grant programs. For example, the Transfer Entitlement Cal Grant is only awarded to students who are under 28, and the Community College Entitlement Award is only paid until adult students have transferred to a four-year university. The Cal Grants *awarded* and *paid* may not accurately reflect the total amount of Cal Grants paid to students in a Community

College; however, they may give us a glimpse into how many students apply versus how many are paid.

Although our research does not focus on why adult students do not access their financial aid awards, it will help understand adult students' persistence to the following term when they receive financial aid. Specifically, this research is unique due to its focus on the Riverside region and the lack of higher education data in the area. This is important because Riverside colleges often serve students from low-income backgrounds and underrepresented populations more frequently than other regions. Similarly, various nonprofits in the region serve these students, and the findings will prove useful for addressing their higher education goals, such as improving financial aid accessibility. This research was made possible through a partnership with the Growing Inland Achievement (GIA), a regional K-16 collaborative focused on advancing educational and economic equity in the Inland Empire. By 2035, GIA aims to make San Bernardino and Riverside Counties known for their educated workforce, thriving communities, and prosperous economy (Growing Inland Achievement, 2025). Their work follows an engagement approach, often partnering with education, government, nonprofits, and businesses. GIA works through a collective impact framework, which allows for aligning actions for community and systems-level changes.

## **Literature Review**

### **Adult Students**

According to the National Center for Education Statistics, an adult student, also referred to as a non-traditional student, is typically defined as an individual aged 25 or older who does not follow the traditional path of attending college immediately after high school. Over 71% of adult students enrolled in college meet at least one of the characteristics used to define non-traditional

students. These include (1) delayed enrollment into postsecondary education, (2) part-time attendance, (3) financial independence, (4) full-time employment while enrolled, (5) having dependents, (6) being a single parent, (7) or not having a traditional high school diploma (MacDonald, 2018; NCES, 2016).

While broadly defined, adult students are far from homogeneous. Demographically, adult students are most likely to be women. In fact, women make up the majority of non-traditional students, with many returning to college to improve their careers, seek financial independence, or serve as role models for their children (MacDonald, 2018). These motivations often come alongside caregiving and household responsibilities, which disproportionately affect women, especially single mothers who face high levels of role conflict and emotional strain while trying to balance school, work, and family (Deutsch & Schmertz, 2011)

Adult students also include a large number of first-generation college students, students of color, and low-income individuals who face structural barriers. Students of color, particularly Latino and Black adults, are overrepresented among those who leave college before completing a degree. First-generation college students, those whose parents have not earned a college degree, also comprise nearly 43% of non-traditional students and are more likely to struggle with navigating higher education systems, understanding financial aid, and finding institutional support (Chen & Hossler, 2017).

Community colleges serve as the primary entry point for adult students due to their lower tuition, flexible scheduling, and open-access policies. (DePaul, 2023). Roughly 63% of adult students attend part-time, often balancing school with work and caregiving (Chen & Hossler, 2017). While community colleges offer accessibility, many still cater primarily to younger, full-time students and lack tailored support for older students.

## **Financial Aid and Persistence**

Adult students consistently demonstrate lower persistence, retention, and graduation rates compared to traditional college students. For instance, only 27% of adult students seeking an associate degree completed it within five years, compared to 53% of traditional students. Among those pursuing a bachelor's degree, 31% of adult students graduated within five years, while 54% of traditional students did. (Choy, 2002). These gaps widen for students classified as highly “non-traditional”, such as those with four or more risk factors like delayed enrollment, part-time attendance, and full-time employment, who had an 11% bachelor's degree completion rate and a 16% associate degree completion rate over five years (Choy, 2002).

These patterns are particularly pronounced at community colleges, where non-traditional students are overrepresented. Among students seeking associate degrees, 46% of non-traditional students dropped out during their first year without earning a diploma, compared to 23% of traditional students (Choy, 2002). The same students were more likely to leave postsecondary education altogether than stop out or transfer (Choy, 2002). Nationally, more than 36 million adults have earned some college credit but never completed a degree (DePaul, 2023). Recent data from the National Student Clearinghouse shows that in 2022, the persistence rate among adult students was 52.3%, and the retention rate was 45.7% (Gardner, 2022). These figures highlight the need for interventions that address the specific barriers adult students face.

Financial aid is one of the few policy tools shown to play an important role in persistence and retention outcomes for college students. Pell Grant recipients, for example, are more likely to remain enrolled and complete their degrees than students who do not receive aid or those relying on loans (Chen & Hossler, 2017). One study found that every \$1,000 increase in Pell Grant aid is associated with a one percentage point increase in six-year degree completion,

especially in the third year when dropout risk is highest (Chen & Hossler, 2017). Similarly, both subsidized and unsubsidized federal loans are associated with a reduced dropout risk among two-year non-traditional students, although loans are often linked to increased financial stress and lower completion rates. (Chen & Hossler, 2017). This suggests that while loans can support persistence, grant-based aid may be more effective in sustaining adult students through graduation.

California's financial aid landscape includes the California College Promise Grant (CCPG), which waives enrollment fees for low-income students. CCPG is widely used, with 91% of California community colleges participating and playing a crucial role in tuition affordability (Rios-Aguilar & Lyke, 2020). However, because CCPG is limited to only low-income students, many adult students who support families and work full time jobs earn too much to qualify, may be excluded from receiving this type of aid, which can hinder their ability to persist in college (Rios-Aguilar & Lyke, 2020).

The Cal Grant, California's primary need and merit-based aid program, has shown stronger associations with persistence. A recent study found that students near the GPA eligibility cutoff who received a Cal grant were 3 to 4.6 percent more likely to complete a bachelor's degree than those just below the cutoff. The increase was driven by improved persistence rather than initial enrollment (Bettinger et al., 2019). These effects were especially strong for lower-income students and academically at-risk students, suggesting that Cal Grants meaningfully support adult students. However, eligibility restrictions such as a recent high school graduation requirement, minimum GPA, age, and full-time enrollment status often disqualify adult students who would otherwise benefit.

Despite the availability of these aid programs, many adult students continue to face gaps in support. In a recent survey of 996 adult students, 56% cited money or resources as the primary reason for dropping out and just over half indicated that a hypothetical \$1,000 tuition increase would likely force them to drop out (Munip & Klein-Collins, 2023). While financial aid can support persistence, these patterns suggest that access to aid, who gets it, how, and when matter just as much as the aid itself. The next sections turn to those access barriers, examining how eligibility requirements, institutional practices, and outreach strategies shape who benefits from available support.

### **Accessibility and Barriers**

Adult students are experiencing difficulties accessing resources to support their higher education journey and navigating complex systems, facing multilevel hardships (Callicott et al., 2024; Osam et al., 2017). While some support is available through various financial aid options, these options are often insufficient or inaccessible for many adult students. According to a study by the Center for Equitable Higher Education (CEHE) in community colleges, many adult students frequently encounter systemic barriers that extend far beyond the classroom, impacting both their access to and success in higher education. The multilevel hardships can be challenging to manage and overcome. Similar to Ellen Fairchild's theory that most challenges among adult students arise from situational, dispositional, and institutional barriers, the RISE Framework, developed by CEHE, is a model that views student success as influenced by interconnected factors across various interpersonal levels and emphasizes the need for coordinated intervention. There is an urgent need for tangible changes that will increase student success in higher education. Accessibility has the potential to decrease barriers across all levels and can benefit student outcomes and persistence, ultimately leading to graduation.

Schools lack supportive measures and targeted interventions for adult students.

“Institutional barriers are described as factors such as admission practices, financial aid, and types of curriculum services adopted that emanate from the institutions limiting participation in postsecondary education” (Osam et al., 2017). Many institutions contribute to non-supportive factors that create barriers for adult students. Whether this be intentional or not, institutions owe it to the students to address barriers they may be facing while in their education system. “Part of the responsibility instructors and schools face in enrolling large populations of adult students is not only teaching the students how to persist and succeed, but to first understand themselves what the students’ deficits and challenges are” (McDonald, 2018). Understanding the various challenges can lead to collaborative support and solutions that will lead to increased persistence among students.

According to a study conducted by the Council for Adult and Experiential Learning (CAEL), many adult students are utilizing multiple sources to fund their college education. In their national survey of 996 adult students, “three-quarters (75%) of all adult learner survey respondents said they used at least two sources of funds, and nearly half (49%) used at least three sources; a very small number (13 respondents, 1% of the total) did not draw on any funding source as they participated in free college initiatives or programs” (Munip & Klein-Collins, 2023). It is evident that adults are seeking to expand their learning and pursue a degree, but the lack of economic support and a lack of understanding of how higher education operates are barriers these students face. The large number of adults in higher education should indicate the urgent need to obtain better resources, increased accessibility, and solutions for persistence and graduation. State and federal grants, scholarships, and loans are not always effective ways to support students throughout their higher education journey. In 2024, the National Association of

Student Financial Aid Administrators (NASFAA) conducted a study that uncovered the financial struggles of adult students. They find, “35% of adults who are currently enrolled in a higher education program said they have considered stopping out in the past six months, and of that group, 54% say they struggle to pay monthly bills” (Carrasco, 2024). The economic struggles that adult students face are significant, and they impact the education that those students receive.

Income level further compounds these barriers. One national study found that the average adjusted gross income among adult students entering two-year institutions was just over \$41,00 (Chen & Hossler, 2017). Black and low-income adult students are twice as likely to report external responsibilities that interfere with their academic progress, such as experiencing financial hardship, food and housing insecurity, and caregiving responsibilities (DePaul, 2023). Marginalized adult students are in danger of not persisting. A qualitative research study done in Massachusetts found that “adult black women of low socioeconomic status are greatly affected by the rising cost of education... which can make postsecondary education unattainable” (Wells-Lopez, 2019). College admissions and financial aid offices should consider how financial aid offers influence students' decisions to enroll, and create financial aid packages tailored to non-traditional students, as colleges have successfully done for traditional students, such as incoming freshmen (Dougherty & Woodland, 2009). For example, high school students are often introduced to the numerous financial aid opportunities available through their counselors, workshops, applications, and college visits, among other means. Unlike traditional students, adult students are often left to navigate financial aid information and process on their own, with little to no professional guidance to help them understand it. Even students who work full time fall short of covering the cost of college and daily expenses without substantial support (Munip

& Klein-Collins, 2023). Economic barriers can limit the way adult students engage in education, their persistence, and their overall academic success.

Furthermore, while many adult students who are single parents are women, regardless of gender, students often face family responsibilities and have others who rely on them.

“Maintaining the upkeep of the home, especially among couples, requires a significant amount of financial resources. It has been posited that the financial burden of returning to school could reduce the resources needed to maintain the home” (Osam et al., 2017, as cited in Goto & Martin, 2009). Having dependents might negatively influence the ability of adult students to thrive in their education. Targeted support is essential, as adult students find ways to thrive despite other stressors they may be experiencing. Adult students require supportive systems that understand their needs.

It is clear that there is an urgent need to equip these students with the proper tools, support, and resources that can help them stay in school, graduate faster, and ultimately enter the workforce as skilled, productive individuals (McDonald, 2018). All levels of policy, institutions, and federal and state governments can work together to fill the gap and bridge resources to meet the needs of students. Communicating with prospective adult students without assuming prior knowledge of student financial aid or the entirety of the US higher education system also helps bridge the uncertainty many adult students have (Taylor & Bicak, 2019). Bridging the gap between these barriers and the limitations of financial aid received by adult students can help improve the experiences and influence a well-rounded approach to higher education.

## **Rationale**

Generally, research finds that access to higher education for adult students can be challenging for various reasons. Adult students who choose to return to or begin their higher

education journey after the age of 25 often find that funding opportunities are either difficult to understand or limited compared to those available to younger students. As a result, we find that various market failures exist that help us analyze and recommend policy interventions.

The first market failure we identify is imperfect information. Although financial aid is available for adult students, general information about availability and eligibility may be more limited compared to other younger groups. A perfect example is the difference between the FAFSA and CADAA applications, as well as the requirement to submit them. Cal Grants are administered through the CADAA application, whereas federal aid is through FAFSA. Additionally, the Cal Grant program, a California-specific financial aid policy, favors recent high school graduates or students who plan to transfer to a four-year college or university. Therefore, the lack of or imperfect information about financial aid opportunities for adult students may result in fewer opportunities to fund their education.

Similarly, the second market failure is public goods. In this case, financial aid information is considered a public good since the resources are non-rival and non-excludable. In other words, adult students can benefit from the same programs and outreach that recent high school graduates receive. Ultimately, both of these market failures justify the need to increase financial aid access to adult students. Although this research will not focus on how and why adult students access or do not access financial aid, we will analyze the impact of each type of aid and how persistence is predicted. With this, we hope that our analysis will reveal the needs of students and how their overall persistence may be connected to access.

### **Hypothesis and Path Model**

Past research has shown the challenges and barriers adult students face when accessing resources for higher education. They face challenges through external barriers and financial aid

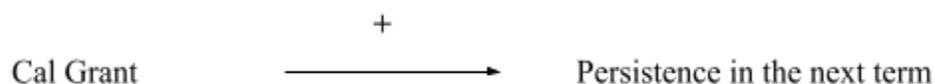
limitations. While we know that receiving financial aid can be supportive in some ways, it remains unclear how it truly impacts persistence in Riverside, CA. However, based on current literature, we hypothesize that in Riverside, various types of financial aid will have an impact on student persistence. Therefore, we hypothesize:

**H1:** All else equal, adult students who received financial aid will be associated with increased odds of persistence in the next term compared to those who did not.



Cal Grants have proven to be beneficial in some instances and with some limitations. There are various types of Cal Grants; however, students are awarded these based on their needs and qualifications. Some of the grants consider income, GPA, and age eligibility, and will set limits on the award amount. Despite the limitations, we believe Cal Grants can help persistence. Therefore, we hypothesize:

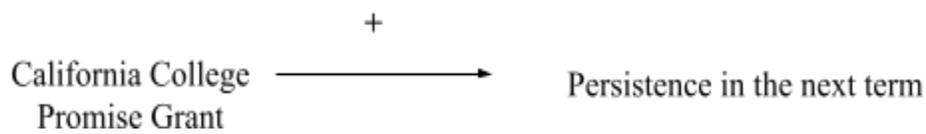
**H2:** All else equal, adult students who received Cal Grant will be associated with increased odds of persistence in the next term compared to those who did not.



The California College Promise Grant differs from other financial aid programs in that it does not provide a direct monetary value. Instead, it waives enrollment fees for eligible students.

Although it does not provide financial assistance for other expenses, obtaining this fee waiver is important for students' tuition affordability. Therefore, we hypothesize:

**H3:** All else equal, adult students who received the California College Promise Grant (CCPG) will be associated with increased odds of persistence in the next term compared to those who did not.



Federal Loans are federally funded, and although they have high interest rates, we acknowledge the need for these types of options. Research indicates that federal loans reduce the risk of drop-out, but this remains unclear in areas of Riverside where students may already be from low-income backgrounds. Regardless, we hypothesize the following based on the support they offer until graduation:

**H4:** All else equal, adult students who received a Federal Loan will be associated with increased odds of persistence in the next term compared to those who did not.



Pell Grants are given only to undergraduate students who can prove they need financial assistance through their FAFSA application. Pell Grants also have limitations and boundaries set

that limit access to adult students. However, we recognize its importance, and the research has been found to help four-year university students. Therefore, we hypothesize the following for adult community college students:

**H5:** All else equal, adult students who received a Pell Grant will be associated with increased odds of persistence in the next term compared to those who did not.



## Methodology

### Data sources

We test our hypotheses using de-identified, individual-student-level data gathered from the Riverside Community College District (RCCD). The panel data is unbalanced, meaning that not all students have records for all four terms. The dataset includes students from the Moreno Valley, Riverside, and Norco colleges. The data collected by RCCD for each student is a sufficient sample size and directly captures the key variables needed to address our research question and the hypotheses.

### Variables

*Dependent variable.* The Dependent variable in this study is a binary indicator of persistence, measured at the student-term level. This means that if a student successfully completed an award during their community college journey, it would be accounted for. Students were coded as “1” if they either remained enrolled in the next term or completed an award or certificate during the term. Students who did not return or did not complete were coded as “0”. This measure reflects prior research showing that persistence and completion are important indicators of academic success for non-traditional students. Many adult students attend school

part-time and temporarily withdraw due to competing responsibilities. Measuring persistence at the term level allows us to capture progress even if the student has not yet graduated.

*Independent Variables.* To assess the odds of receiving financial aid and its impact on persistence, we included binary independent variables that capture whether a student received financial aid or a specific type of financial aid during a given term. The main independent variable is **Financial Aid**, with additional independent variables that explore individual types of financial aid, including the **Pell Grant**, **California College Promise Grant (CCPG)**, **Cal Grant**, and **Federal Loans**, which encompass both subsidized and unsubsidized loans. Each variable is coded as “1” if the student received aid and “0” otherwise. Each of these financial aid types is widely used in California community colleges and was selected based on a literature review showing their relevance to non-traditional student persistence. Pell Grants, for instance, have been linked to increases in retention and completion (Chen & Hossler, 2017). CCPG, while it only waives tuition fees, is widely used in California community colleges.

*Control Variables.* A series of control variables was included to account for individual-level characteristics known to influence persistence. These include binary indicators for part-time, “1” indicates whether a student is enrolled part-time in school, and “0” otherwise. We wanted to account for this, as prior research has found that over 70% of California community college students are enrolled part-time (Rauner & Smith, 2020).

Additionally, we included demographics, for Black, binary indicator with “1” Yes, indicating whether the student is Black and No, “0”. As well for Hispanic, with “1” indicating yes, the student is Hispanic and “0”, No. These variables are included based on a literature review showing racial disparities in college persistence, particularly among Black and Latino adult students (DePaul, 2023; Dougherty & Woodland, 2009).

Finally, women comprise the majority of nontraditional students and often face unique challenges related to caregiving and time management, which may affect persistence. We included a binary variable, with “1” indicating that Yes the student is a female, and all others were coded as “0”, indicating No. Lastly, having dependents has been associated with greater financial pressure and reduced time for school, which can negatively affect persistence. We included the control variable, whether they have dependents (Yes “1”, No “0”).

All variables are measured at the student-term level, meaning each row in the dataset corresponds to a specific student in a specific academic term. In total, the data includes 22,462 unique students and a total of 40,021 student-term observations across four terms: Fall 2022, Spring 2023, Fall 2023, and Spring 2024. This structure allows us to track changes in enrollment status and financial aid receipt over time, allowing us to measure persistence term by term. Since not all students were enrolled in every term, the panel is unbalanced. This design enables us to analyze student changes over time while retaining students who were only enrolled for one or two terms, an important consideration when studying adult students, whose enrollments are often nonlinear.

### **Analysis Strategy**

As part of the analysis strategy to test our hypotheses, we ran a logistic regression using STATA/SE 18. Specifically, since the outcome variable is binary, a logistic regression model best meets the needs of this research. In addition, since the data structure consists of repeated observations of only some students over four different terms, we used the `xtlogit` command to inform Stata that it is an unbalanced panel. This approach was used to determine whether adult students who receive (H1) financial aid, (H2) Cal Grant, (H3) California College Promise Grant, (H4) Federal Loans, or (H5) Pell Grant have higher odds of persisting or completing the terms

than those who did not receive financial aid. Given the data structure and to account for the control variables mentioned, we specifically created three new control variables: Black students, Hispanic students, and Women students. By creating these additional variables, we can find whether receiving any type of financial aid and being Black, Hispanic, or a woman influences the odds of persisting at the Riverside Community Colleges.

## Results

### Descriptive Statistics

The analysis began with reviewing the descriptive statistics of each variable. Table 1 shows the specific descriptive statistics for each of the variables. For example, the dependent variable describes the impact of persistence or completing the term in our dataset. In the “*Overall*” column, we see that 61% of all student records showed persistence or completion of the term over the four observed terms. However, in the “*Between*” column, we see that 58% of students demonstrated persistence across all terms. In terms of Financial Aid, we see that in the *Overall* column, 63% of all student records received at least one type of financial aid over the course of four observed terms. The *Between* column tells us 61% of students consistently received financial aid across all terms.

In addition, when analyzing the control variables of *Black students*, *Hispanic students*, *Female students*, *Part-time students*, and *Students who have dependents*, we find that their descriptive statistics are worth noting. For example, according to the *Between* column, about 10% of student observations in our dataset are *Black*, about 58% of student observations are *Hispanic*, about 55% of student observations are *Female*, about 79% of student observations are enrolled *part-time*, and less than 1% of student observations *have dependents*.

**Table 1: Descriptive Statistics**

	<b>Overall</b>		<b>Between</b>		<b>Within</b>
<b>Persistence or Completed Term</b>	Freq.	Percent	Freq.	Percent	Percent
0	15525	38.790	14301	63.670	81.210
1	24496	61.210	13008	57.910	83.400
Total	40021	100.000	27309	121.580	82.250
<b>Received any Financial Aid</b>	Freq.	Percent	Freq.	Percent	Percent
0	14498	36.230	9700	43.180	94.640
1	25523	63.770	13713	61.050	96.860
Total	40021	100.000	23413	104.230	95.940
<b>Received Pell Grant</b>	Freq.	Percent	Freq.	Percent	Percent
0	29297	73.200	17950	79.910	95.010
1	10724	26.800	6240	27.780	86.670
Total	40021	100.000	24190	107.690	92.860
<b>Received California Promise Grant</b>	Freq.	Percent	Freq.	Percent	Percent
0	14767	36.900	9841	43.810	94.790
1	25254	63.100	13558	60.360	96.870
Total	40021	100.000	23399	104.170	96.000
<b>Received Cal Grant</b>	Freq.	Percent	Freq.	Percent	Percent
0	35900	89.700	21504	95.740	96.850
1	4121	10.300	2298	10.230	71.150
Total	40021	100.000	23802	105.970	94.370

**Table 1 Continued: Descriptive Statistics**

Received Federal Loans	Freq.	Percent	Freq.	Percent	Percent
0	39239	98.050	22209	98.870	99.620
1	782	1.950	414	1.840	81.480
Total	40021	100.000	22623	100.720	99.290
Student is Black	Freq.	Percent	Freq.	Percent	Percent
0	35846	89.570	20049	89.260	99.970
1	4175	10.430	2423	10.790	99.800
Total	40021	100.000	22472	100.040	99.960
Student is Hispanic	Freq.	Percent	Freq.	Percent	Percent
0	16575	41.420	9471	42.160	99.940
1	23446	58.580	13001	57.880	99.970
Total	40021	100.000	22472	100.040	99.960
Student is Enrolled Part-time	Freq.	Percent	Freq.	Percent	Percent
0	15040	37.580	8921	39.720	76.470
1	24981	62.420	17797	79.230	87.880
Total	40021	100.000	26718	118.950	84.070
Student has Dependents	Freq.	Percent	Freq.	Percent	Percent
0	39832	99.530	22401	99.730	99.770
1	189	0.470	189	0.840	59.740
Total	40021	100.000	22590	100.570	99.430

**Table 1 Continued: Descriptive Statistics**

Student is Female	Freq.	Percent	Freq.	Percent	Percent
0	17311	43.250	9978	44.420	99.980
1	22710	56.750	12488	55.600	99.980
Total	40021	100.000	22466	100.020	99.980

**(n = 22462)**

### Regression Results

Table 2 reports the random-effects logistic regression model predicting the odds of persistence or term completion. The results show that most financial aid variables are significant as it pertains to persisting or completing the term. Specifically, we found that receiving Cal Grants and Pell Grants are key predictors of persistence or completion of the term. We also found that it was statistically significant when controlling for being a *Black student* or *enrolled part-time*. Specifically, *Black students* are associated with 36% lower persistence than others. When a student was *enrolled part-time*, our results found that students were 91% less likely to persist or complete the term. Table 3 provides a summary of the hypothesis results.

For *Hypothesis 1*, our regression results confirm that students receiving any type of financial aid are 56% more likely to persist or complete the term. This particular result was statistically significant and consistent with the literature. *Hypothesis 2* results confirm that students who receive Cal Grants are more likely to persist or complete the term by 135% compared to other students. Although not many students received this type of aid, its impact on students' persistence compared to non-Cal Grant recipients is quite significant. The results for students who received the California College Promise Grant are not consistent with *Hypothesis 3*, as 13% of students are less likely to persist or complete the term; however, the results are not statistically significant. Receiving Federal Loans is consistent with *Hypothesis 4*, but not

statistically significant since 13% of students are more likely to persist or complete the term. Lastly, consistent with *Hypothesis 5*, students receiving a Pell Grant were 14% more likely to persist or complete the term compared to students who did not receive it.

**Table 2: Results for Random-effects Logistic Regression Predicting the Odds of Persistence or Completing the Term**

Persistence or Completed Term	Odds Ratio	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Received any Financial Aid	1.566	.262	2.68	.007	1.128 2.174	***
Received Pell Grant	1.149	.047	3.37	.001	1.06 1.246	***
Received California College Promise Grant	.865	.144	-0.87	.384	.625 1.198	
Received Cal Grant	2.353	.149	13.50	0	2.078 2.664	***
Received Federal Loan	1.135	.142	1.01	.312	.888 1.452	
Student is Enrolled Part-time	.081	.003	-62.36	0	.075 .088	***
Student is Female	.962	.029	-1.28	.202	.907 1.021	
Student is Black	.632	.034	-8.64	0	.569 .701	***
Student is Hispanic	1.016	.033	0.48	.631	.953 1.083	
Student has Dependents	1.504	.277	2.21	.027	1.048 2.159	**
Constant	6.934	.308	43.66	0	6.357 7.564	***
Insig2u	.007	.072	.b	.b	-.134 .149	
Mean dependent var		0.612	SD dependent var		0.487	
Number of obs		40021	Chi-square		4429.980	
Prob > chi2		0.000	Akaike crit. (AIC)		43849.052	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**Table 3: Summary of Hypothesis and Results**

Hypothesis	Results
<b>H1:</b> All else equal, adult students who received Financial Aid will be associated with increased odds of persistence in the next term compared to those who did not.	<b>Confirmed/ Significant</b>
<b>H2:</b> All else equal, adult students who received Cal Grant will be associated with increased odds of persistence in the next term compared to those who did not.	<b>Confirmed/ Significant</b>
<b>H3:</b> All else equal, adult students who received the California College Promise Grant will be associated with increased odds of persistence in the next term compared to those who did not.	<b>Not Confirmed/ Not Significant</b>
<b>H4:</b> All else equal, adult students who received Federal Loans will be associated with increased odds of persistence in the next term compared to those who did not.	<b>Confirmed/ Not Significant</b>
<b>H5:</b> All else equal, adult students who received a Pell Grant will be associated with increased odds of persistence in the next term compared to those who did not.	<b>Confirmed/ Significant</b>

### Discussion and Policy Implications

In higher education, it can become easy to assume that various types of financial aid available to students are helping and making a positive impact on their lives. The results of this research highlight important topics that require attention. It is essential to acknowledge the barriers and challenges faced by adult students and recognize that obtaining financial aid can be beneficial, but it is not the sole solution to supporting adult students.

Findings indicate that Cal Grants have a significant impact on overall student success. However, the Cal Grant system currently prioritizes recent high school graduates and full-time students, which are limitations to accessibility for adults. Others, like the *Transfer Entitlement Cal Grant*, are only awarded to students who are under 28, which can be limiting for adults. Additionally, the *Community College Entitlement Award* is only paid until adult students have transferred to a four-year university, again putting limitations and barriers on the aid students receive. We recommend that policymakers expand eligibility criteria, such as removing age

requirements, to include more adults and expand eligibility to part-time learners, who are currently underrepresented but highly responsive to this form of aid. Increasing accessibility for Cal Grants can bridge the gap to higher education.

When addressing the California College Promise Grant (CCPG), we find that our hypothesis is not confirmed and is not significant. One potential reason for this may be the lack of monetary support that CCPG gives students. “The waivers are simply a transaction for which no money is received” (California Community Colleges, 2025), and providing students with this aid is helpful, but it does not show us much about the impact. We recommend that CCPG expand its reach and become more accessible to adult students to create longer-lasting impacts, such as reducing drops and withdrawals, which can affect their completion rate and eligibility for this waiver.

Findings for Federal Loans show an impact on persistence, but it is not statistically significant. A surprising finding was the low number of students receiving Federal Loans in this sample. This may be the case due to the high stress that debt could bring to students, so most may avoid it altogether (Chen and Hossler, 2017). The impact on persistence suggests the significance of the aid, but our recommendations focus on addressing the Federal Loans' impact on a larger scale of adult students. This includes removing eligibility criteria that can be harmful to accessibility (Wells-Lopez, 2019).

Our hypothesis was confirmed and was statistically significant that Pell Grants impacted the odds of persistence. The impact this grant has on student success portrays the importance of available aid that can truly help adult students in their academic journey. However, increased support can facilitate access to aid, such as Pell Grants. Limitations on the aid, such as the six-year time restriction on using the grant money, can create additional stress barriers, including

debt repayment and financial stress (Wells-Lopez, 2019). Many students are part-time and might take longer than six years to complete their degree. Because this barrier limits access to aid, we recommend extending the grant period. Past initiatives, such as the Summer Pell (SP) program, which provided funding for summer semesters outside the traditional Pell schedule, resulted in a 5.6 percentage point increase in second-year retention and a 2.6 percentage point increase in three-year associate's degree completion among adult students (Liu et al., 2023). Given the external barriers and challenges that exist outside of education, such as family, community, or work, it is crucial to support adult students by extending grant periods to accommodate these factors.

The results for part-time and students with dependents highlight important factors that are often overlooked. For example, “both male and female participants reported that being engaged in several roles at home served as barriers to re-entry” (Osam et al., 2017). Given these barriers, colleges should consider adapting their support services, such as advising, tutoring, and counseling, to evening or weekend hours that accommodate the varying schedules of adult students, who often balance multiple roles at home. Furthermore, we recommend expanding flexible course offerings, such as online or hybrid courses, and considering support and aid policies that don't exclude part-time students. In addition, tailored support for women is essential. For example, daycare programs or providing care for children can be supportive to these students. “Increasing the availability of on-campus childcare increases the persistence of single mothers” (Wells-Lopez, 2019). Osam, Bergman, and Cumberland (2016) further note that without institutional supports, such as flexible scheduling, on-site childcare, and targeted advising, these gendered constraints can undermine persistence and completion among adult

women learners. Women make up the majority of adult students (MacDonald, 2018), and tailored support for them can influence their persistence in school.

At Riverside Community College campuses, we recommend providing extensive outreach and application support targeted at adult students, especially those re-entering college after a period of absence, and those from underrepresented backgrounds. Black students are exposed to more barriers than their peers when it comes to economic challenges, food and housing insecurity, and familial and household responsibilities (DePaul, 2023). Therefore, we recommend targeted support for Black students. Black students in higher education institutions are often subject to feelings of isolation and marginalization (Wells-Lopez, 2019), especially in institutions that aren't culturally responsive to Black students. Implementing targeted retention initiatives, including culturally responsive advising, mentorship programs, and systematic reviews of institutional barriers such as campus climate, staff training, and curriculum equity, would benefit Black marginalized student populations. Additionally, all adult students would benefit from application workshops offered in the evenings or online, as well as aid specialists in adult reentry programs, and equitable practices to ensure accessibility. Colleges must not overlook marginalized groups that require support.

Lastly, we must acknowledge that efforts to improve affordability and access to postsecondary education can help get adults into the classroom or into online learning opportunities, however, this is only the first hurdle (Klein-Collins, 2010). A significant policy is the Prior Learning Assessment (PLA), which enables institutions to award academic credit for skills a student has acquired outside of academic classrooms and programs. This allows students to engage and persist even when their skills are not always developed within the classroom. Students who earn credit through Prior Learning Assessment (PLA) also show significantly

higher graduation and persistence rates (Klein-Collins, 2010). Among adult students, 56% of PLA earners completed a degree within seven years, compared to just 21% of non-PLA students (Klein-Collins, 2010). We recommend implementing this policy as many adult students can benefit from these supportive measures.

Various methods of financial aid and overall support exist for adult students. However, there are limitations to creating tangible changes in the students' academic journey that we should consider. As we analyze and understand the important aspects of the education system, adult students are a group that can't be forgotten, as their input into society is valuable, and helping them reach academic success will, in turn, benefit our community.

### **Limitations and Future Research**

Although this research makes an important contribution to our understanding of the impact of financial aid on adult students in Riverside, it has some limitations. Our initial journey in data collection led to many dead ends, leaving us with national data and numerous unanswered questions regarding impact and persistence. The Riverside Community College District provided us with de-identified, individual student-level data, allowing our research to explore other topics. However, the study draws on unbalanced panel datasets, presenting only binary variables and covering four academic terms. The relatively short time frame limits the ability to observe long-term educational outcomes, such as persistence or degree completion, which are especially relevant for adult students.

Another limitation of this study involves the relatively low number of students who receive Federal Loans in our sample. Only a small portion of adult students at Riverside Community Colleges borrowed Federal Loans during the study period, and our estimates may not fully capture the true effect of loan receipt on persistence. While our regression results

showed a positive association between loans and persistence, existing literature has found mixed or even negative effects on student loans. Particularly when it comes to long-term outcomes, such as graduation, this raises an important question for future research: whether federal loans help students persist in the short term or simply increase their risk of non-completion over time due to repayment. Additional studies with larger loan receipt samples and extended follow-up periods could help clarify whether loans serve as a short-term financial bridge or a long-term barrier for adult students.

Another limitation is that our data did not include the amount of aid students received, only whether they received financial aid or not. Without that, we cannot really assess if receiving more aid improves persistence or completion, which has been suggested in other studies. Additionally, the California College Promise Grant, which was received by the majority of students in our sample, limits the ability to detect its independent effect on persistence. When a variable is almost universal, it becomes difficult to distinguish between students who are benefiting from it and those who are not.

Future research should incorporate qualitative methods, such as interviews, focus groups, or open-ended surveys with adult students, to analyze the accessibility of financial aid. This would offer deeper insights into their lived experiences navigating the financial aid system, the specific barriers they face when applying for or maintaining aid, and their challenges of juggling school, work, and caregiving responsibilities. Furthermore, future research should closely examine how institutional supports, such as academic advising and reentry programs, impact persistence. Do these resources actually help students stay on track, or are they underutilized or inaccessible? Ultimately, future studies should investigate how the amount of aid received affects persistence. Looking beyond the type of aid received, researchers should examine whether larger

or more consistent awards are associated with better academic outcomes for adult students. This would help clarify whether aid plays a meaningful role in supporting their continued enrollment and completion.

Other directions for future research also exist. Although our analyses include sufficient datasets to understand the research question, it would also be useful to examine the research question from a different angle, such as accessibility. This research was conducted in partnership with Growing Inland Achievement (GIA) and the University of California, Riverside's School of Public Policy. Should the partnership and collaboration continue, they can expand on this current research that explores how adult students access financial aid. For example, future studies can focus on administering surveys that can tell us how adult students access financial aid information and funds, how they navigate financial aid offices, and what additional support they would benefit from. Qualitative and quantitative data can provide further insights to explain the reasons for our findings.

### **Conclusion**

It has been established that financial aid significantly influences higher education outcomes for all students; however, limited research has not necessarily focused on the individual impact of each type of aid, nor its effect on persistence among adult students enrolled in Riverside community colleges. Overall, our logistic regression results show that over the course of four semesters, the 22,462 adult students who received any or all types of Financial Aid (H1) had increased the odds of persistence. Furthermore, we confirmed Cal Grants (H2) and Pell Grants (H5) specifically increased the odds of persistence, underscoring the importance of maintaining and expanding need-based grants for adult students. Federal Loans (H4) results were consistent with the hypothesis, but were not statistically significant. Lastly, the California

College Promise Grant (H3) did not influence the odds of persistence, which raises questions about the impact of aid that only covers tuition without addressing broader financial needs, such as books, food, and transportation.

Additionally, this research provides insight into adult students at Riverside Community College District, thereby encouraging local government and other public service leaders to invest in and continue research on adult students. Specifically, these findings have meaningful implications for policy reforms and reveal that not all aid is equally effective in helping adult students stay enrolled. For example, financial aid policies should extend beyond California College Program Grants that offer fee waivers, given that they do not influence persistence compared to other grants that provide direct monetary funds. Additionally, policies should aim to expand eligibility, increase reach, and make aid more accessible to minority students, thereby creating longer-lasting impacts.

Adult students are not like other students; as the literature shows they encounter far more barriers than their peers (DePaul, 2023). As our results show, marginalized groups like Black students are in need of essential targeted support. Aside from policy reforms, Riverside-area research organizations should continue to study financial aid for adult students, specifically how they navigate and access systems. Accessibility is crucial to understanding the core issues that adult students continue to face as they pursue higher education.

As Riverside and the rest of the Inland Empire continue to grow and diversify, supporting adult students through intentional financial aid policies is essential not only for individual success, but also for strengthening the region's workforce and economic mobility. Investing in their education is a long-term investment in the community's future.

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