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How do place-based scholarships affect student borrowing and academic outcomes? Lessons from Atlanta

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How do place-based scholarships affect student borrowing and academic outcomes? Lessons from Atlanta

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Abstract

Previous research shows that Achieve Atlanta's placed-based scholarship and associated services meaningfully improve college persistence and completion. In this follow up study that uses similar methods but additional and more detailed data, we examine whether scholarship recipients exhibit different student loan portfolios, course-taking patterns, or academic performance. Using regression analyses, we find that students in their first semester of college who receive the scholarship and associated services are less likely to take out loans, borrow lower amounts, earn more credit hours, and attain higher GPAs. Additionally, we find no evidence that the place-based scholarship crowds out institutional aid. These effects are important in their own right but also shed light on the mechanisms driving earlier findings on college success.

Keywords: Place-based scholarships, financial aid, student loans, higher education

How do place-based scholarships affect student borrowing and academic outcomes? Lessons from Atlanta

I: Introduction

Over the past 20 years, the average in-state tuition at public universities has more than doubled (Kerr & Wood, 2023). Tuition list prices for private institutions and out-of-state public institutions have grown even more substantially. As a result, many students must rely on financial aid of various forms to make college affordable, and those from economically disadvantaged backgrounds may feel discouraged from attending college altogether (Levine et al., 2023). This is true for students graduating from the Atlanta Public Schools (APS), 75 percent of whom qualify for free or reduced-price meals. To support college success among APS graduates, Achieve Atlanta (AATL) was founded in 2015 and provides qualifying APS graduates with a combination of scholarship funds and college counseling services to support them to and through college.

Bueno, Page, and Smith (2024) find that receiving the AATL Scholarship and associated services meaningfully improves college persistence and completion. Specifically, they estimate that, conditional on enrollment, AATL Scholars are 10.6 percentage points (16 percent) more likely to persist to their second year of college and 4.6 percentage points (22 percent) more likely to earn a bachelor's degree within four years compared to observationally similar APS graduates who enrolled in college without AATL support. These findings are consistent with studies of place-based scholarships in other localities (Carruthers & Fox, 2016; Gurantz, 2020; House & Dell, 2020; Miller-Adams, 2015; Page & Iriti, 2016; Page et al., 2019a). Compared to the robust evidence on the impacts of place-based scholarships on accessing, progressing through, and completing college, there is very little evidence on whether, how, and the extent to which such scholarships affect other aspects of students' postsecondary experience (Lasota et al., 2024). In this paper, we contribute to filling this gap in the literature by examining how AATL Scholarship

receipt affects students both financially and academically. In doing so, we provide evidence regarding the potential mechanisms underlying the impacts of place-based scholarships on college persistence and completion.

Financially, place-based scholarships could alter the types of financial aid on which students rely and, more specifically, could reduce students' need to borrow for college. Reducing reliance on borrowing may be particularly important for shaping the college trajectories of low-income students who can exhibit higher rates of loan aversion (Boatman et al., 2017). In this way, scholarship support can reduce the stress students experience from borrowing as well as the need for students to work for pay in order to afford college (Bueno et al., 2024). In turn, students will be able to devote more time to their studies. Doing so may facilitate earning better course grades and accumulating credits more quickly.

That financial and academic outcomes are not explored in existing literature is likely a function of data availability, our second contribution to the literature. The National Student Clearinghouse affords researchers the ability to track student-level college access, persistence, and completion across most postsecondary institutions in the U.S. In contrast, researchers less commonly have access to key financial and academic process measures across institutions. We have the opportunity to make use of such data through a data-sharing partnership involving the University System of Georgia (USG)[1] and the Technical College System of Georgia (TCSG).[2] Together, these systems comprise all of Georgia's public postsecondary institutions and serve approximately 71 percent of all AATL Scholars.[3]

[1] https://www.usg.edu/institutions
[2] https://www.tcsg.edu/find-a-college/
[3] Roughly 96 percent of AATL Scholars who attend USG or TCSG enroll in a USG institution.

With student-level data linked across these two postsecondary systems, APS, and AATL,[4] we examine the relationship between AATL Scholarship receipt and a set of financial and academic outcomes. Financially, we investigate whether AATL Scholars borrow less or take on different types of student loans (e.g., loans with more favorable terms) compared to non-scholars. Academically, we consider whether AATL Scholars attempt and complete more credit hours and whether they exhibit stronger course performance, as measured by grade point average (GPA), compared to similar non-scholars. We focus on these outcomes in the first semester of college because, as noted above, AATL Scholars are more likely than their observationally similar counterparts to persist in and complete college (Bueno et al., 2024). This differential persistence challenges our ability to compare AATL Scholars and non-scholars on academic and financial outcomes over multiple semesters.

We primarily use ordinary least squares (OLS) regression to compare the financial and academic outcomes of AATL Scholars and their non-scholar counterparts attending the same USG or TCSG college. Bueno et al. (2024) used the same analytic approach in their focus on persistence and completion.[5] We acknowledge that OLS has the potential to lead to biased estimates if AATL Scholars differ from non-scholars for reasons we cannot account for in our regression models. However, we find similar estimates with a variety of robustness tests that address specific and common unobservables documented in the literature as leading to bias.[6] Additionally, coefficient stability tests (Oster, 2019) suggest that any remaining unobservables that could lead to bias are unlikely to negate our primary conclusions.

[4] Each of these datasets from USG, TCSG, APS, and AATL are accessed through partnerships with the Georgia Policy Labs, which is where the data are housed and analyzed.
[5] We explored using a regression discontinuity design that exploits the minimum threshold requirements. But similar to Bueno, Page, & Smith (2024), the estimates are too noisy to be informative.
[6] Our results are also reaffirmed when we use propensity score matching methods.

To preview our findings, in the first semester of college, AATL Scholars are 7 percentage points (18 percent) less likely than non-scholars to take on any student loans. This relationship is driven by reductions in unsubsidized federal loans and PLUS loans, the federal student loans with the least favorable repayment terms. This corresponds to AATL Scholars borrowing $608 (43 percent) less, on average, than non-scholars in the first semester. The difference in amount borrowed is due, in part, to AATL Scholars being offered less in total loans and, in part, to AATL Scholars borrowing a lower share of the loans offered to them. Encouragingly, there is no evidence that the AATL Scholarship crowds out institutional grant-based aid. Academically, AATL Scholars attempt and earn more credit hours and earn GPAs that are 0.11 GPA points (5 percent) higher, on average, compared to non-scholars. Combined, these results suggest the AATL Scholarship helps students financially and academically in their first semester of college. These results also illuminate potential mechanisms underlying the improved persistence and completion for scholarship recipients reported in earlier work (Bueno et al., 2024).

II: Background and Literature Review

2.1 Background

Founded in 2015, Achieve Atlanta's goal is to make Atlanta "a city where race and income no longer predict postsecondary success and upward mobility."[7] To that end, Achieve Atlanta (AATL) provides a college scholarship of up to $5,000 per year for up to four years to qualifying students. AATL is one of the many place-based scholarships that have been introduced starting with the Kalamazoo Promise in 2005.[8] Like other such programs serving students in a particular

[7] https://achieveatlanta.org/about-us/.
[8] https://www.upjohn.org/promise/.

locality, AATL focuses exclusively on promoting college-going among students who graduate from Atlanta Public Schools (APS). Unlike many others, AATL also offers support beyond direct financial aid. AATL partners with APS to ensure that high school seniors are aware of the AATL Scholarship and to help them navigate college application and financial aid processes. AATL also partners with a set of local Georgia colleges to provide on-site academic and financial advising, as well as social-emotional support such as gatherings to promote Scholars' sense of belonging on their campuses. These services on college campuses are only available to AATL Scholars, not all APS graduates. Additionally, only AATL Scholars are eligible for emergency grants, which provide up to $500 per academic year for "a recent unexpected event or challenging circumstances that led to financial challenges."[9] In sum, AATL aims to support Scholars more holistically through their postsecondary education journey.

AATL uses a combination of need-, merit-, and residency-based criteria to determine scholarship eligibility. To qualify, APS graduates must have attended an APS high school for at least their last two years of high school, have a final high school GPA of 75 or more (on a 100-point scale), and demonstrate financial need. Students are defined as having financial need if their family has an Expected Family Contribution (EFC) of $8,000 or less, as calculated from the Free Application for Federal Student Aid (FAFSA).[10] Students who earn a high school GPA of 75 or higher receive up to $1,500 per year towards their education if they attend a two-year college. Students who earn a high school GPA of 80 or higher receive up to $5,000 per year if they attend a four-year college.[11]

[9] https://achieveatlanta.org/emergency-grants/
[10] The EFC threshold was expanded to $15,000 in 2023 and adjusted to meet the change to the Student Aid Index.
[11] 75 and 80 GPAs on the 100-point scale are about 2.0 and 2.7 GPAs on the 4-point scale.

Unlike Georgia's well-known Helping Outstanding Pupils Educationally (HOPE) Scholarship as well as many other place-based supports, AATL Scholarship receipt is not contingent on attending an in-state institution. Rather, AATL Scholars have comparatively more flexibility and are encouraged to apply to and attend any college in the U.S. as long as its graduation rate is at least 43 percent, which is close to the national average. In addition, the AATL Scholarship's high school GPA requirement is lower than that of the HOPE Scholarship. In sum, AATL serves as an important source of support for students with financial need who do not qualify for Georgia HOPE by virtue of their academic performance and/or attending college outside of the state.

2.2 Literature Review

More than 100 communities across the United States have implemented Promise scholarship programs. Substantial variation exists across these programs along dimensions such as generosity of scholarship aid, eligibility criteria, college requirements, and whether scholarship support is provided as a first-dollar or last-dollar award. Nevertheless, promise programs generally share common goals: improving student access to postsecondary education through financial support; building a college-going culture and promoting academic rigor at the high school level; and promoting economic development through a workforce with improved postsecondary credentials (Miller-Adams, 2015).

With the proliferation of Promise programs, research on their impacts has also proliferated. Place-based scholarships across a diversity of geographies, including the states of Tennessee and Oregon and the cities of Kalamazoo, MI, Pittsburgh, PA, Tulsa, OK, Buffalo, NY, and El Dorado, AR have had positive effects on college enrollment (Andrews et al., 2010; Bartik et al., 2021;

Carruthers & Fox, 2016; Gurantz, 2020; House & Dell, 2020; Miller-Adams, 2015; Page & Iriti, 2016), on earnings (Bettinger et al. 2019), and on college persistence and degree attainment (Bartik et al., 2021; Bell & Gándara, 2021; Bifulco et al., 2019; Bueno et al., 2024; Swanson & Ritter, 2020).

These positive effects are generally consistent with the broader literature on the impacts of grant aid on student outcomes. In a recent meta-analysis, Lasota and colleagues (2024) show that in studies of grant aid – including funding from federal and state governments, universities, and philanthropic organizations – average effects on enrollment, persistence and completion were 5.6 percentage points, 2.4 percentage points, and 2.6 percentage points, respectively. To note, these average effects are based on different combinations of studies.

Compared to relatively robust evidence on the impacts of grant aid, generally, and place-based scholarships, more specifically, on accessing, progressing through, and completing college, much less well understood is how and the extent to which such scholarships affect students either academically or financially during college. Turning first to academic outcomes, Lasota et al. (2024) note that far fewer studies included in their meta-analysis considered measures of postsecondary academic achievement (and they do not consider impacts on financial aid packages in their meta-analysis). In considering all types of grant aid, Lasota et al. (2024) find a moderate, positive effect of grant aid on credit accumulation and no detectable effect on academic achievement. Most relevant to the program on which we report, Lasota and colleagues (2024) also point out that the evidence on the effects of grant aid on postsecondary academic achievement comes primarily from studies of state and institutional aid. In contrast, there is comparatively little evidence on the effect of Promise programs specifically on either credit accumulation or academic achievement. Two exceptions to this are studies highlighted in a recent systematic review from

Swanson and colleagues (2020). First, Bartik et al. (2015) find positive effects of the Kalamazoo Promise on postsecondary credits attempted, and second, Carruthers and Fox (2016) find positive effects of Knox Achieves on credits earned within two years of high school graduation. A final exception is found in Scott-Clayton's (2011) study of the West Virginia Promise. In it, she shows that the statewide WV Promise does impact student achievement in college, with effects concentrated around the annual academic performance requirements associated with continued eligibility for the funding. In this way, the Promise funding incentivizes academic performance, at least in the parts of the performance distribution where students are at greater risk for losing their Promise support. In sum, substantial room remains for learning about the impacts of Promise support on students' academic achievement in college.

In this paper, we also consider the impacts of Achieve Atlanta funding on students' financial aid packages and loan borrowing behavior. Based on existing promise research, the relationship between promise funding and financial aid packages including borrowing has a limited evidentiary base, with a few exceptions. For example, related to the Florida Bright Futures Scholarship, Borg et al. (2021) found that the scholarship led to a reduction in loan debt but only for the lowest-income students. Related to students' financial aid packages overall, there is concern that colleges could essentially capture external scholarship funds by adjusting down the institutional aid that Promise recipients are awarded. There is some evidence for this type of price discrimination based on studies of Pell Grants. For example, evidence suggests that Pell-eligible students receive more institutional aid on the margin of Pell eligibility but receive less institutional aid for each dollar of Pell received above the eligibility threshold (Lucca et al., 2019; Turner, 2014). Similarly, in Tennessee and Oregon, statewide promise programs led to overall increases in grant aid per student but with some reduction in institutional grants (Odle et al., 2025). However,

given that local promise programs, such as AATL, support a small share of all students attending a given institution, colleges may be less responsive. Indeed, in an investigation of potential institutional reactions to an increase in the generosity of the Pittsburgh Promise, Lowry et al. (2024) find no conclusive evidence that institutions engaged in aid displacement in response to a doubling of the maximum annual Promise award.

Related to student borrowing, Perna (2025) notes that very little is known about whether or how promise programs at the state, institutional or local levels affect student borrowing. Chakrabarti et al. (2020) report evidence that state merit aid programs have led to reductions in student loan debt. More specific to programs with the promise nomenclature, the one exception that Perna (2025) highlights is work from Odle et al. (2021) which finds that the TN Promise reduced student borrowing by 8 to 10 percentage points and reduced the average student loan amount by 32 percent.

A final study worth highlighting is Page et al.'s (2019b) study of the Dell Scholar's Program, which provides financial and non-financial supports to selected students, primarily from low-income backgrounds, who come from and attend institutions throughout the U.S. Using extensive data collected by the program on students who apply to and are selected as Dell Scholars, this paper first provides evidence that the combination of supports provided by the program leads to improved college persistence and degree completion. Then, by matching Dell Scholars to observationally similar students in the Beginning Postsecondary Students Survey, Page and colleagues (2019b) provide evidence that Dell Scholars are less likely to borrow federal, Parent PLUS, or private loans, are less likely to work while in school, are more successful at accumulating credits towards a degree over time, and earn higher cumulative GPAs. An important limitation of

this study, however, is that these more detailed academic and financial measures come from disparate data sources that also pertained to different academic years.

Taken together, while we have fairly robust evidence that grant aid generally and promise programs specifically can affect college access, persistence and degree attainment, we have comparatively little insight into whether and how such support affects students' experiences in college along academic, financial, and other dimensions. We reason that this gap in the literature is driven primarily by data availability. College access, persistence and completion can be tracked for students attending a variety of institutions, both public and private, using National Student Clearinghouse records. In contrast, data sources that allow for multi-institution tracking of key process measures such as course-taking and performance, credit accumulation, student loans, and other sources of financial aid are much less commonly available for research. As detailed in the following section, by linking administrative student-level data across four sources, we contribute to filling the gaps we have identified in the literature by examining the relationship between AATL Scholarship receipt and selected student-level financial and academic outcomes.

III: Data and Methods

3.1 Data

We use individual-level data from APS, AATL, University System of Georgia (USG), and the Technical College System of Georgia (TCSG). USG and TCSG together include all public colleges and universities in the state of Georgia. We focus on APS students in the high school graduating cohorts of 2016 through 2021 who go on to enroll in a USG or TCSG college. This sample encompasses 71 percent of all AATL recipients in the cohorts we consider.

APS administrative data provide student demographics such as race, sex, free or reduced-price meals (FRPM) status, high school attended, and final high school GPA. Given the AATL Scholarship requirements and our data sources, we limit our sample to those who (1) enrolled at APS for at least the last two years in high school and (2) earned a high school GPA of 75 or greater. AATL data provide student-level information on AATL application and scholarship receipt, including scholarship amount received.

Table 1 reports the summary statistics of the 5,273 APS students who graduated between 2016 to 2021 and initially attended a USG or TCSG institution, both overall and separately by scholarship receipt. Among those in our sample, 72 percent applied for the AATL Scholarship, and 58 percent received funding. A large majority of the sample enrolled in a postsecondary institution within the University System of Georgia, and just 5 percent enrolled within the Technical College System of Georgia.

On average, Scholars received almost $2,000 in AATL funding in their first semester of college. This is below the maximum possible $2,500, as some two-year college enrollees are eligible for only $750, and a small fraction of four-year enrollees do not need the full grant amount. On several measures, AATL Scholars appear less advantaged than their non-scholar peers. AATL Scholars are substantially more likely to be black, FRPM eligible, Pell grant recipients, and first-generation college students. While the AATL Scholars are more likely to receive the HOPE Scholarship, they are considerably less likely to receive the Zell Miller Scholarship, reserved for the highest performing public high school graduates in Georgia. Accounting for these differences will be important in our effort to understand the effects of the AATL Scholarship on students' postsecondary outcomes.

Data from USG and TCSG include detailed, student-level financial aid data, including Expected Family Contribution (EFC), loan borrowing, and receipt of scholarships and grants. In the years we consider, EFC was calculated based on information students report on their FAFSA and was used to determine the federal financial aid for which a student qualified.[12] Data on student loans allow us to examine whether loans are taken, the types of loan (e.g., subsidized, unsubsidized, PLUS), and loan amounts.[13] We also examine whether students received other scholarships and grants, including Georgia HOPE and the federal Pell Grant. About 46 percent of students in our sample take out at least one type of loan, and the most frequently borrowed loans are federal subsidized and unsubsidized loans.

USG and TCSG records also include detailed academic data at the course and semester levels. The primary academic outcomes we consider include the number of credit hours attempted, the number of credit hours earned, and college GPA in the first semester. Students in our sample earned an average first-semester GPA of approximately 2.2. Eighty-eight percent of the sample attended college full-time with 14.3 credit hours attempted in the first semester, on average.

We focus on these financial and academic outcomes in students' first semester of college.[14] As noted above, our ability to track these outcomes over subsequent semesters is affected by AATL's effects on overall college persistence (Bueno, Page & Smith, 2024).[15]

[12] https://studentaid.gov/help-center/answers/article/what-is-efc

[13] Summary statistics on additional outcomes are provided in Appendix Tables 1.

[14] Less than 0.5 percent of students enroll in more than one institution during the first semester. We focus on the institution with relatively more credit hours.

[15] Appendix Table 2 reaffirms the results in Bueno, Page, & Smith. (2024) that AATL Scholars are more likely to persist and complete a degree than non-scholars, even in this subsample of students who attend USG or TCSG.

3.2 Methods

To examine the relationship between scholarship receipt and our focal outcomes, we fit linear regression and linear probability models of the following general form:

$$Y_{ihtc} = \beta_0 + \beta_1 AATL_i + GPA_i\theta + X_i\delta + H + T + C + \varepsilon_{ihtc}$$

where Y_{ihtc} represents each of the first-semester college outcomes for student i, who graduated from high school h in cohort t, and who attends college c. Our variable of interest, $AATL_i$, is an indicator that takes the value of one if student *i* receives the AATL Scholarship and zero otherwise. β_1 represents the relationship between receiving the AATL Scholarship (and its associated support services) and the outcome. We recognize that, because of the non-financial supports provided to AATL Scholars on selected campuses, β_1 is not strictly the effect of the AATL Scholarship alone. We do not have data on the take-up of non-financial supports that are offered, so β_1 represents the effect of receiving scholarship funds and the opportunity to take up other supports.

As shown in Table 1, Scholars and non-scholars differ on a number of dimensions that could lead to bias in our estimate of β_1, so we add a rich set of controls. Related to academic preparation for college, *GPA* represents final high school GPA such that we are comparing students with similar high school academic performance and, as a result, similar eligibility for AATL Scholarship support. We do so flexibly by splitting high school GPA (measured on a 100-point scale) into 2.5-point bins and including the full set of corresponding GPA-bin fixed effects in our models. X is a vector of student-level characteristics, including indicators for race/ethnicity, sex, eligibility for free- or reduced-price lunch in high school, and first-generation college student status. We also for control financial need by including the following measures: an indicator for Pell Grant receipt, amount of Pell Grant, Expected Financial Contribution (EFC), and an indicator for missing Pell or EFC status. During the timeframe of our analysis, Pell Grant eligibility and

generosity were determined by a student's EFC, their total cost of attendance, and their plans for full- or part-time enrollment. By controlling for Pell Grant eligibility and generosity together with the fixed effects discussed below, we are able to limit our comparison to students attending the same institution, at the same enrollment intensity, and with the same estimated household ability to pay for college.

We include a set of high school and cohort fixed effects, denoted H and T, respectively. This allows us to compare students who attended the same high school and in the same cohort, both of which are correlated with scholarship receipt. We also include a fixed effect for the first postsecondary institution attended, C, so that we are comparing students who attend the same college and, consequently, face a similar set of financial affordability circumstances including sticker price and available institutional aid.[16] Lastly, ε is the idiosyncratic error term. We use heteroskedastic robust standard errors, clustered at the high school level.

3.3 Threats to Identification

Our primary model specification, and the one on which we focus in our presentation of results below, includes the full sample of 5,273 students and includes the fixed effects and covariate controls described above. Results from this model specification are presented in column 1 of our primary outcomes tables below. Even after accounting for the fixed effects and controls described above, it remains possible that AATL Scholars and non-scholars differ along other unobservable dimensions that could lead to bias. For example, financial resources, academic preparation not captured by high school GPA, and student motivation to attend and complete

[16] The enrolled college is potentially impacted by scholarship receipt, which would make *C* an outcome, not a control variable. However, Bueno, Page, & Smith (2024) find no evidence that scholarship receipt impacts whether or where students enroll. We reaffirm this result with this subsample in Appendix Table 3. Additionally, results are not sensitive to excluding *C*.

college are not directly observable for all students and may systematically differ between AATL Scholars and non-scholars. Therefore, we run several additional analyses in which we aim to mitigate the possibility that our results are affected by these and other potential sources of bias to the fullest extent allowable by the data.

First, we limit the sample only to students who attend college full time. Full-time attendance is a scholarship eligibility requirement, and enrollment intensity dictates tuition and aid available to students. Second, we use the subsample of students with a reported EFC less than $8,000 - the AATL maximum eligible EFC. This removes non-scholars with relatively higher sources of income that have no common support with AATL Scholars. Third, we combined the previous two data restrictions of full-time enrollment and EFC. Finally, we use only the subsample of students who applied for the AATL Scholarship. By doing so, we hope to remove non-scholars who systematically differ from AATL Scholars in knowledge of the Scholarship (or other sources of knowledge) and demonstrated interest in attending college. This condition removes many non-scholars.

In addition to OLS, we use propensity score matching to compare AATL Scholars and non-scholars.[17] This alternative strategy ensures common support on predicted scholarship receipt, comparing AATL Scholars to matched non-scholars. Our PSM-based results are largely similar to those from OLS, although we note that PSM likely suffers similar potential bias due to unobservables. To be consistent with earlier work, we emphasize the OLS-based estimates in our presentation of results below. We additionally follow Oster (2019) and evaluate the potential bias of our OLS estimates by comparing the coefficients before and after the inclusion of control variables.

[17] A regression discontinuity design was severely underpowered, even in the first stage when using high school GPA or EFC as the running variable.

IV: Results

4.1 Loan-Taking

We begin by examining the relationship between AATL Scholarship receipt and loan-taking outcomes. We present our estimates in Table 2. Each row corresponds to a distinct outcome, and each column corresponds to a different model sample. All models include the demographic and academic controls as well as the fixed effects for high school, cohort and college described above.[18]

AATL Scholars are 7.4 percentage points (18 percent) less likely to take any student loans in their first semester compared to non-scholars (column 1). Estimates fluctuate modestly across the columns but are statistically indistinguishable from one another and are qualitatively similar. Column 2 limits the sample to only students who attend college full-time. The point estimate increases in magnitude to 9 percentage points. A requirement of the AATL Scholarship is to enroll full-time, so this is arguably a more appropriate sample, especially since the financial obligations and decisions of students differ dramatically with enrollment intensity. Column 3 uses the subsample of students with a reported EFC less than $8,000 - the AATL maximum eligible EFC - and yields a coefficient estimate of -0.073, similar to model 1. Combining the previous restrictions slightly increases the magnitude of the estimate in column 4. Finally, column 5 uses the subsample of students who applied for the AATL Scholarship, and the estimate remains similar, -0.078. In short, the result on loan taking fluctuates only modestly across specifications.

The next three rows suggest that the overall difference in loan taking stems from significant differences in federal unsubsidized loans and PLUS loans but not federal subsidized loans. More specifically, the AATL Scholars are 10.4 percentage points (27 percent) less likely to borrow

[18] The means for non-scholars from each row and column are located in Appendix Table 4.

federal unsubsidized loans and 4.7 percentage points (44 percent) less likely to borrow PLUS loans. Our estimated effect associated with subsidized loan taking is negative but indistinguishable from zero in column 1, although it is negative and significant for certain specifications (columns 3 and 4). Unsubsidized loans and PLUS loans offer the least favorable loan terms, relative to subsidized loans, as both accrue interest while the borrower is enrolled in college. A reduction specifically in these types of loans can have positive long-term financial benefits for students.[19]

On the intensive margin, we estimate that AATL Scholars borrow $608 (43 percent) less than non-scholars, on average. Considering this figure pertains only to the first semester of college, similar patterns of borrowing over time would accrue to a substantial reduction in indebtedness over several years of college. As above, this overall difference is driven primarily by differences in unsubsidized and PLUS loans, but subsidized loans still play a role. These results are robust across our different specifications.[20]

In the final two rows of Table 2, we observe that AATL Scholars are substantially less likely to take on relatively large, single-semester loans (e.g., loans of over $2,500 or $5,000). In sum, AATL Scholarship support is associated with lower borrowing overall and a reliance on a different and more favorable mix of loan instruments.[21]

The effects that we observe on loan borrowing could be driven by at least two potential mechanisms. First, the AATL Scholarship funding could reduce students' unmet financial need, thereby reducing the loan amounts for which they are eligible. Second, receiving the AATL

[19] To summarize our main results from Table 2 and make the comparison clearer, we present the estimates from our preferred specification in Appendix Figure 1, along with the control means from Appendix Table 4.

[20] Appendix Table 4 displays the control means for the loan outcomes for non-scholar.

[21] Appendix Table 5 shows the cumulative loan amounts through their entire postsecondary enrollment. Over this longer duration, the effect on taking on any loans is smaller in magnitude compared to the first semester main estimates (-0.029 vs -0.074). As noted earlier, this is likely in part because AATL Scholars are more likely to persist and therefore have more opportunities to accumulate loans. Even so, over this longer period, Scholars borrow $1229 less than non-scholars, on average. In sum, despite persisting longer, scholars still end up with less cumulative debt.

Scholarship opens the door to conversations and financial counseling support prior to enrollment, which ultimately could shape students' choices about taking up the loans that they are offered. In Table 3, we consider evidence related to these potential mechanisms by looking at differences in the amount of loans offered by the university and the amount of loans taken by the student. We note that we have this granular loan data only for the subset of students in our sample who attend a USG institution, which is 95 percent of AATL Scholars. Even for students at USG institutions, however, we have partial information for investigating these possibilities, as we only observe students' final financial aid packages and do not know if these final packages differ from what might have been awarded initially and before the AATL Scholarship was finalized.

In Table 3, column 1, we observe that AATL Scholars' final financial aid packages offered by their institution include an average of $787 less in loans. This overall difference is made up by differences in unsubsidized and PLUS loans, and to a lesser extent, subsidized loans. This result is consistent with the first mechanism. However, it does not rule out the second mechanism that students choose fewer loans relative to what is offered after receiving the AATL Scholarship.

We find that not only were AATL Scholars offered less in loan funding, but they also borrowed a smaller share of the loan funding that they were offered.[22] We calculate a ratio of loan aid taken to loan aid awarded to quantify this mechanism. With this as our outcome, we find that this ratio is approximately 8 percentage points lower for AATL Scholars. This effect is consistent with the possibility that AATL Scholars make active and informed choices about which of the loans offered to them they should take up and, if they are taking them up, how much to take.

[22] For example if a non-scholar borrowed $2000 from a total loan package of $4000 offered (a 50% take-up rate), a comparable Scholar would accept $669 less (or $1331) from an initial offer that is $787 less (or $3213). Borrowing $1331 of an offered loan package of $3213 equates to a take up rate of approximately 41%.

In sum, we find evidence consistent with both proposed mechanisms for the ways in which AATL support is associated with reduced loan burden in the first semester of college. AATL Scholars are awarded less in student loans compared to their counterparts, and they take up a somewhat smaller share of the loans that they are awarded.

4.2 Academics

In Table 4 we present results for the relationship between AATL Scholarship receipt and academic outcomes for students in both USG and TCSG institutions. Here again, the first column is our preferred specification, and the subsequent columns are subsamples to assess the robustness of our results to potential confounding factors. In their first semester of college, AATL Scholars earned GPAs that were 0.11 points higher, on average, compared to similar students without AATL funding. The mean college GPA for non-scholars is 2.22,[23] so 0.11 points represents about a 5 percent improvement. We estimate a positive coefficient of a similar magnitude in almost all of the columns that follow.

AATL Scholars also attempted an average of 0.25 more courses, attempted 0.55 more credit hours, and earned one more credit hour compared to non-scholars.[24] Most courses are 3-4 credit hours so this represents a meaningful increase in credit hours earned. The effects that we estimate on credits attempted are relatively small and less consistently significant. Therefore, we conclude that the effects on GPA and credits indicate improved academic performance more so than a marginal increase in the academic load students are taking on. Improving academic performance is further bolstered by the meaningfully different estimates on number of credit hours

[23] Appendix Table 6 displays the control means for the academic outcomes for non-scholars.
[24] The corresponding control means are reported in Appendix Table 6. To summarize results from the first column of Table 4 and make the comparison clearer, we present the estimates from our preferred specification in Appendix Figure 2.

attempted (close to 0.5) compared to the number of credit hours earned (close to one). Since the latter estimate is greater than the former, students are not just taking more credit hours, they are also completing the courses they may have always taken in the absence of the scholarship, but now they do so with a sufficiently strong course grade to earn additional credit hours.

Additionally, attending full-time (i.e., 12 or more credit hours) and earning at least two-thirds of the credit hours attempted are two of AATL's requirements to receive continued funding. Likely driven by these requirements, AATL Scholars are nearly 7 percentage points more likely to attempt and earn at least 12 credit hours and are 4.9 percentage points more likely to earn two-thirds of the credits attempted. Combined, these results indicate that recipients may be responsive to the scholarship requirements.[25] However, Scholars are also about 3 percentage points more likely to earn at least 15 credits hours, which is above the required minimum. This suggests that the AATL Scholarship and associated services help and/or incentivize students to accrue academic credits more quickly, consistent with four-year completion results in Bueno, Page and Smith (2024).

4.3 Additional Robustness and Stability Checks

Table 5 shows the results from a propensity score matching analysis. We estimate the propensity score with a logit model that includes the same control variables we use in our OLS models: gender, race, high school GPA, FRPM, high school attended, first college attended, first-generation college student, Pell amount, EFC of zero, and EFC (discretized into bins). Column 1 has the following EFC bins: $1k bins for $1-10k, $2k bins for $10k-20k, and top coded at $20k

[25] Appendix Table 7 shows the cumulative GPA, cumulative credit hours attempted, and cumulative credit hours earned through the second semester at the initial institution (i.e., GPAs and credits from drop out and transfers do not accumulate). The coefficients on credit hours are much larger in part because AATL Scholars are more likely to persist.

whereas column 2 EFC bins are: $1k bins for $1-10k, $5k bins for $10k - 20k, and top coded at $20k. We use the nearest neighbor to calculate the average treatment effect, using a one-to-one match with replacement. Point estimates from the propensity score matching method generally are quite similar to those from OLS. Standard errors do tend to be larger, however, and so some point estimates are no longer statistically different from zero.

Next, we conduct coefficient stability tests following Oster (2019). By doing so, we assess the likelihood that there are remaining unobservables (relative to our observables) that would render our estimates statistically indistinguishable from zero. We present results in Table 6. Columns 1 and 2 show the impact of scholarship receipt and the associated R-squared, respectively, when we do not control for any variables. Columns 3 and 4 show the same two statistics after controlling for demographics and financial need, and adding high school GPA, high school, college, and cohort fixed effects. Column 5 presents the highest possible R-squared, which is calculated as 1.3 times the controlled R-squared, as suggested in Oster (2019). Column 6 is the estimated importance of unobservables in our model that would render our estimates to zero. For example, if this importance measure is two, then the unobservables that we cannot control for in our model would have to be twice as important as the observables that we can control for to render the associated point estimate statistically indistinguishable from zero. That most of the Column 6 estimates are greater than two provides reassurance that the extent of bias from unobservables is likely relatively small.

Section V: Additional Results

5.1 Differential Effects by Additional Merit Aid

Next, we consider whether the effects of the AATL Scholarship differ by other sources of financial aid receipt. Other sources of aid have the potential to enhance the impacts of the AATL Scholarship, even if there are diminishing marginal impacts of more aid. On the other hand, other sources of financial aid could help students "enough" such that the AATL Scholarship has no additional impact. Table 7 reports the differential impacts of AATL Scholarship receipt on financial and academic outcomes among HOPE Scholarship recipients, among Zell Miller Scholarship recipients, and among those who receive neither of these merit aid awards.

Columns 1 and 2 of Table 7 present coefficients for HOPE Scholarship recipients and Zell Miller Scholarship recipients, respectively. Within both of these groups of students, we see a reduction in total, unsubsidized, and PLUS loan dollar amounts for those who receive AATL Scholarship support. Overall, these do not differ substantially from our main results, so we infer that the effects of the AATL Scholarship and associated supports are still beneficial to students with additional merit-aid programs. Stated another way, the state's merit aid programs, even the most generous one, are not filling all the financial needs of students who have income levels similar to AATL Scholars.

We present effects of the AATL Scholarship for students who receive neither HOPE nor Zell Miller in column 3. Across the various financial and academic outcomes, there are no patterns of glaring (or statistical) differences relative to the previous two columns. The AATL Scholarship is associated with more positive outcomes for these students. This suggests that the AATL Scholarship is also helpful to students who have financial need but whose high school GPAs were generally not high enough to qualify for the state's merit-based scholarships.

5.2 Differential Effects by High School GPA

Next, in Table 8 we explore whether there are differential effects of the AATL Scholarship by students' high school GPA. Who qualifies for the AATL Scholarship is a policy decision and knowing which students benefit the most informs where dollars are being spent efficiently but also may hint at where more support, financial or otherwise, could also be beneficial. Table 8 displays effects estimated within 5-high school GPA point bins.[26]

On the extensive margin, we find fairly consistent effects for loan reduction for AATL Scholars in all but the highest GPA range. Scholars in all but the top bin are five to nearly 11 percentage points less likely to take any student loans in the first semester. These effects are less precisely estimated and therefore not significant in the GPA ranges of 85-90 and 90-95. In all four GPA ranges, we observe sizable and significant reductions in take up of federal unsubsidized loans.

On the intensive margin, AATL Scholars within all GPA ranges except the highest borrow significantly less than their non-scholar counterparts, with effects ranging from $467 to $761. Within all four groups, this reduction is driven most consistently by reductions in unsubsidized loans and in some cases reductions in PLUS loans. The largest reduction in loan amount is within the 90-95 GPA range. These students are also eligible for the HOPE Scholarship, further evidence of the synergy between other sources of merit aid and AATL Scholarship. In sum, the AATL Scholarship and related services significantly reduce borrowing within all but the highest GPA ranges.

Table 8 also presents academic outcomes by high school GPA. Different from the financial outcomes, we find no effects of the AATL Scholarship and services on academic outcomes within

[26] The corresponding control means are presented in Appendix Table 8.

the 75-80 GPA range. These students receive smaller scholarships, on average, and are more likely to attend two-year colleges compared to their higher performing peers. Scholars within the high school GPA ranges of 80-85, 85-90, and 90-95 have, on average, better academic outcomes than their non-scholar counterparts. They earned college GPAs that were 0.15 to 0.18 points higher, attempted 0.3 to 0.4 more courses, attempted 0.8 to 1.8 more credit hours, were 8 to 9 percentage points more likely to attempt at least 12 credit hours, and were 6 to 12 percentage points more likely to earn at least 12 credit hours. Scholars in these three ranges earn one to three credit hours more, a large increase given that most courses are 3-4 credit hours. Finally, Scholars in the 85-90 range were more likely to earn at least 15 credit hours and earn two-thirds of the credits they attempted, again suggesting that the AATL Scholarship receipt set these students on a more rapid academic trajectory.

5.3 Differential Effects by Sex

In Table 9 we explore heterogeneous effects by sex. Across both financial and academic outcomes, results are generally similar for men and for women. This is in contrast to other types of college-going supports, which often have stronger impacts for women compared to men (e.g., Carrell & Sacerdote, 2017).

5.4 Crowding out of Additional Aid

Finally, one concern with almost any source of financial aid, including the AATL Scholarship, is the possibility of financial aid displacement. For example, scholarship providers are concerned that if a student receives an external grant or scholarship, their college or university will respond to the availability of that external funding by reducing institutional aid that it would have otherwise provided to the student. A related concern is that students may pursue fewer other

sources of aid if they expect to receive certain financial aid with a high degree of certainty (Lowry et al., 2024). Although we do not have a mechanism to observe all of the potential sources of financial aid that students' pursued, we can consider whether there are differences in the types and amounts of institutional, grant-based aid that students were awarded. To note, we are only able to observe this detailed financial aid data for students attending USG institutions.

We present results in Table 10.[27] Across outcomes related to institutional grants – including all grants, athletic grants, need-based grants, and other non-need based grants – we find no differences between AATL Scholars and their non-scholar counterparts in whether they received funding in these categories or how much they received in them. To put this result in context, on average, Scholars and non-scholars only received about $130 in institutional grants in their first semester of college. Taken together, we find no evidence that the USG institutions are engaging in aid displacement by reducing institutional grant generosity in response to AATL Scholarship funding, however, institutional grants appear to be only a minor component of students' financial aid packages. The low level of institutional grant aid for students in our sample implies that there is not much room for institutions to adjust down this source of aid in response to AATL funding.

In the bottom panel of Table 10, we further assess whether there are broader impacts on total aid received since the AATL Scholarship receipt could impact other aid opportunities beyond institutional aid or whether students substitute loans for grants. Across all subsamples in the bottom panel, we find that AATL Scholars receive more total aid and total grant aid than non-scholars.

[27] We were interested in studying differences due to the receipt of work study, but only a very small share of the sample (1.6 percent) participated in work study. For this reason, we did not pursue this line of inquiry further.

Section VI: Discussion

Place-based college scholarship programs in a variety of settings have had positive effects on the college persistence and success of the students receiving them. These include the Illinois Promise (Gershenfeld, 2016), the Kalamazoo Promise (Bartik et al., 2021; Billings, 2018), the Cal Grant (Bettinger et al., 2019), and the Tennessee Promise (Zumeta & Huntington-Klein, 2020), among others. Recent evidence reveals similarly positive effects for recipients of scholarship and other support from Achieve Atlanta, which aims to improve college-going outcomes among low-income graduates of the Atlanta Public Schools. For example, Bueno et al. (2024) estimates that AATL Scholars are 22 percent more likely to complete a BA within four years compared to observationally similar APS graduates who enrolled in college without AATL support. Research on these scholarship programs together contributes to our understanding that targeted, place-based scholarships can serve to improve college-going outcomes for students. In the Atlanta context, this includes students from low-income backgrounds, many of whom are also first-in-their-family to attend college.

Much less well understood, to date, is how scholarship provision can affect students' experiences and progress while in college. This is primarily because data systems that provide individual-level data for students across multiple institutions along dimensions such as academic performance and borrowing behavior are not nearly as readily available as data on students' semester-by-semester persistence and ultimate degree completion provided through sources like the National Student Clearinghouse. A unique data sharing arrangement allows us to overcome this data challenge.

Using student-level data for all APS students attending college within either the USG or TCSG system, we show that, in their first semester of college, AATL Scholars borrow significantly

less than their observationally similar counterparts. A 7.4 percentage point difference in loan taking is comparable to effects observed in related research. For example, the Tennessee Promise reduces loan taking for first-time, full-time students by 8-10 percentage points (Odle et al., 2021). Furthermore, AATL Scholars are particularly less likely to rely on unsubsidized federal loans and PLUS loans. These are federal loans with the least favorable terms, as they accrue interest even while the borrower is enrolled in college. This reduction in borrowing is driven by two forces. First, AATL Scholars are awarded less in loans, we presume as a financial aid package adjustment in response to the AATL Scholarship itself. Second, AATL Scholars borrow a somewhat smaller share of the total loan funding they are offered. Perhaps Scholars become more informed consumers of the loans that they are offered. Still, the majority of the effect on total borrowing appears driven by differences in loan packaging rather than student decision making. Finally, we find no evidence that colleges and universities are responding to the AATL funding by reducing other sources of institutional grant-based aid. This is consistent with Lowry et al. (2024) who find no evidence that public institutions in Pennsylvania strategically responded to an increase in the generosity of the Pittsburgh Promise. In the context that we consider here, institutional aid is relatively low for both Scholars and non-scholars compared to other sources of financial aid. Given this, there is little room for institutions to respond to AATL funding in this way. Alternatively, institutions could respond by increasing their tuition prices, but this is unlikely given that AATL Scholars are a relatively small fraction of all enrollees at any institution in our sample.

These findings are important for policy makers. They point to the financial benefit that place-based scholarships provide to students. This may be especially relevant given the rise in college costs and the student-loan debt "crisis." Our results suggest that expanding place-based scholarships that are targeted to lower-income students can help current and future students reduce

their student loan debt. Doing so will likely allow these students to be more ready for larger financial investments of adulthood, such as home ownership. Furthermore, students who attend and complete college, on average, realize stronger labor market and earnings outcomes (Gunderson & Oreopoulos, 2010) which can translate to a host of better life outcomes for themselves and their offsprings, including reduced participation in crime, reduced take up of social benefits, increased civic engagement, and improved health outcomes (McMahon, 2010).

More broadly, our results speak to the positive impact of need-based aid for students across the academic distribution. We found evidence that Georgia's relatively generous merit aid programs are not filling all the financial needs of students who have income levels similar to AATL Scholars. Our results suggest that the AATL Scholarship and services also improve the financial and academic outcomes of students who do not receive state merit aid, highlighting the fact that need-based aid can be beneficial, even to students who are less academically prepared than those who qualify for merit aid.

Academically, AATL Scholars perform better than their observationally similar counterparts. Their GPAs are somewhat better, they attempt and pass more course credits, and they are more likely to attend college full-time, setting them on a better trajectory to degree attainment even in their first semester of college. Our results suggest that scholars are not only taking more credit hours but also completing credits at higher rates. These results suggest that the AATL Scholarship and its associated supports enable students to realize greater academic success. This accelerated credit accrual points to one mechanism underlying scholars' higher rates of persistence and completion in comparison to non-scholars (Bueno, Page & Smith, 2024).

These quantitative findings on academic outcomes are further bolstered by recent qualitative interviews conducted with AATL Scholars. In these interviews, Scholars drew

connections between the impact of the AATL Scholarship funds on reducing their financial burden and stress, reducing their need to work for pay, and, in turn, increasing their ability to devote time and effort to their coursework (Bueno et al., 2024). Reducing students' need to work for pay has been linked to positive academic benefits in other contexts (e.g., Darolia, 2014), but studying other potential impacts of financial burdens and loans are harder to capture, at least in administrative data. Clearing the way for students to invest in their studies has the potential to increase students' knowledge base and the skills they will rely on in the labor market and also to complete college in a timely fashion.

Finally, it is worth highlighting that the vast majority of students supported by AATL funds (91 percent of Scholars in our data) are Black, by virtue of the program's focus on students graduating from the Atlanta Public Schools. The Supreme Court's recent rulings against affirmative action in college admissions (Students for Fair Admissions v. President and Fellows of Harvard College, 2023; Students for Fair Admissions v. University of North Carolina, 2023), together with the more recent *Dear Colleague* letter from the U.S. Department of Education Office of Civil Rights,[28] puts using race as a selection criteria for college scholarships and other college-going supports in peril (Wong, 2023). Additionally, the fate of the U.S. Department of Education, which administers federal student loans, and its operations are in question. In this context, place-based scholarships may serve as a more certain path towards students' ability to finance their college education. Especially amid such shifting policies, place-based scholarships stand as a promising strategy for working toward racial equity in college access and success.

[28] https://www.ed.gov/media/document/dear-colleague-letter-sffa-v-harvard-109506.pdf

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Table 1: Summary Statistics on Postsecondary Education Outcomes

Demographics	Analysis Sample	Scholars	Non-scholars
Female	0.602	0.660	0.520
Black	0.769	0.911	0.571
Hispanic	0.056	0.059	0.051
FRPM eligible	0.754	0.919	0.523
High school GPA	86.761	86.324	87.373
First generation college student	0.238	0.294	0.158
Attend USG	0.945	0.962	0.920
Attend TCSG	0.055	0.038	0.080
Pell Grant	0.722	0.936	0.421
HOPE Scholarship	0.363	0.434	0.264
Zell Miller Scholarship^	0.122	0.047	0.231
Federal Work Study^	0.016	0.023	0.005
Applied to AATL Scholarship	0.723	1.000	0.335
Received AATL Scholarship	0.583	1.000	0.000
Average AATL Scholarship amt+	1175.265	1993.341	0.000
Received $750+ in AATL Scholarship+	0.573	0.972	0.000
Received $2500+ in AATL Scholarship+	0.425	0.721	0.000
Loan outcomes			
Any loans	0.463	0.500	0.411
Federal subsidized loan	0.398	0.489	0.270
Federal unsubsidized loan	0.386	0.390	0.380
Federal PLUS loan^	0.073	0.050	0.106
Other loans	0.024	0.018	0.033
Total loan amount	1429.798	1432.939	1425.404
Federal subsidized loan amount	657.427	799.356	458.869
Federal unsubsidized loan amount	483.042	450.214	528.967
Federal PLUS loan amount^	229.000	140.556	358.322
Other loans amount	73.010	48.161	107.775
Academic outcomes			
GPA at institution	2.167	2.127	2.224
Number of courses attempted	4.980	5.119	4.784
Credit hours attempted	14.366	14.596	14.042
Credit hours earned	10.472	10.715	10.130
Attempt 12+ credit hours (fulltime)	0.875	0.911	0.825
Earn 2/3 of attempted credit hours	0.639	0.649	0.626
Observations	5273	3075	2198

Note: The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to those who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. ^USG only. + Amount reflects average without AATL Scholarship amount for Fall 2020 due to missing variable.

Table 2: Impact of Scholarship Receipt on Loan Outcomes

Subsample	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
Outcomes					
Any loans	-0.074***	-0.096***	-0.073**	-0.083**	-0.078**
	(0.015)	(0.023)	(0.019)	(0.024)	(0.022)
Federal subsidized loans	-0.025	-0.036	-0.066**	-0.073**	-0.025
	(0.018)	(0.025)	(0.019)	(0.025)	(0.021)
Federal unsubsidized loans	-0.104***	-0.131***	-0.100***	-0.114***	-0.110***
	(0.017)	(0.023)	(0.016)	(0.021)	(0.024)
Federal PLUS loans^	-0.047***	-0.056***	-0.029*	-0.036**	-0.064***
	(0.010)	(0.012)	(0.011)	(0.013)	(0.014)
Other loans	-0.019*	-0.022**	-0.028**	-0.031**	-0.020*
	(0.007)	(0.006)	(0.008)	(0.009)	(0.010)
Total loan amount	-608.712***	-726.615***	-652.861***	-720.281***	-720.472***
	(61.811)	(86.740)	(81.886)	(95.189)	(73.223)
Federal subsidized loan amount	-104.013*	-121.167*	-191.433***	-199.901***	-107.191*
	(39.354)	(48.945)	(46.050)	(51.527)	(45.796)
Federal unsubsidized loan amount	-254.589***	-302.264***	-224.287***	-247.415***	-278.393***
	(31.735)	(41.164)	(32.274)	(35.819)	(45.641)
Federal PLUS loan amount^	-185.009***	-226.586***	-133.521**	-164.371***	-278.643***
	(36.324)	(41.501)	(38.021)	(42.241)	(54.929)
Other loans amount	-74.997**	-81.546**	-103.670***	-108.595**	-73.168*
	(21.297)	(25.332)	(25.971)	(31.025)	(34.930)
Total loan $2500 or more	-0.108***	-0.126***	-0.107***	-0.115***	-0.114***
	(0.016)	(0.021)	(0.015)	(0.018)	(0.022)
Total loan $5000 or more	-0.080***	-0.095***	-0.089***	-0.101***	-0.094***
	(0.009)	(0.010)	(0.012)	(0.013)	(0.015)
Observations	**5273**	**4613**	**3789**	**3362**	**3811**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell status or EFC amount. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. ^USG only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 3: Amount Offered vs Amount Taken (USG only)

Subsample	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
<u>Outcomes</u>					
Any loans offered amt	-787.314***	-892.169***	-784.997***	-866.927***	-947.959***
	(76.415)	(102.225)	(73.809)	(89.277)	(90.675)
Subsidized loans offered amt	-163.246**	-168.852**	-262.455***	-269.049***	-185.752***
	(45.255)	(52.939)	(40.019)	(45.713)	(40.377)
Unsubsidized loans offered amt	-326.662***	-369.585***	-267.131***	-291.338***	-375.072***
	(42.956)	(49.644)	(38.985)	(44.851)	(58.859)
PLUS loans offered amt	-216.067***	-264.398***	-153.454**	-197.808***	-314.029***
	(54.562)	(61.071)	(47.519)	(45.884)	(75.749)
Other loans offered amt	-81.340**	-89.334**	-101.957**	-108.732**	-73.104
	(22.580)	(25.263)	(26.960)	(31.177)	(38.366)
Any loans taken amt	-668.521***	-762.615***	-651.220***	-722.860***	-779.228***
	(79.989)	(99.600)	(82.540)	(95.695)	(101.835)
Subsidized loans taken amt	-120.977*	-130.385*	-190.063***	-201.033***	-119.640*
	(46.986)	(53.436)	(45.957)	(51.652)	(56.380)
Unsubsidized loans taken amt	-281.076***	-316.601***	-224.319***	-247.415***	-306.205***
	(37.672)	(45.966)	(32.186)	(35.819)	(50.611)
PLUS loans taken amt	-185.009***	-226.586***	-133.521**	-164.371***	-278.643***
	(36.324)	(41.501)	(38.021)	(42.241)	(54.929)
Other loans taken amt	-81.460**	-89.042**	-103.316***	-110.042**	-74.740
	(22.220)	(24.833)	(26.801)	(30.994)	(37.803)
Ratio of taken amt over offered amt	-0.078**	-0.090**	-0.074**	-0.078**	-0.084**
	(0.022)	(0.028)	(0.020)	(0.025)	(0.027)
Observations	**4981**	**4488**	**3786**	**3362**	**3626**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. Offered amount refers to the amount of loan that was awarded to the student from Federal Subsidized, Unsubsidized or other sources. The taken amount refers to the actual amount the student has taken out of the offered amount. For example, a student could be offered $5000 in Federal Subsidized loans and the student may take $1000, $2000 or all $5000. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 4: Impact of Scholarship Receipt on Academic Outcomes

Subsample	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
Outcomes					
College GPA	0.106**	0.112***	0.130**	0.167***	0.062
	(0.031)	(0.024)	(0.036)	(0.033)	(0.049)
Number of courses attempted	0.249***	0.121***	0.286***	0.192***	0.249**
	(0.037)	(0.026)	(0.047)	(0.037)	(0.080)
Number of credit hours attempted	0.546***	0.051	0.570***	0.168	0.515
	(0.137)	(0.109)	(0.107)	(0.118)	(0.254)
Attempted 12+ credit hours (full-time)	0.067***		0.046***		0.061**
	(0.013)		(0.010)		(0.019)
Attempted 15+ credit hours	0.022	-0.008	0.027	0.007	0.005
	(0.022)	(0.025)	(0.022)	(0.028)	(0.031)
Number of credit hours earned	1.042***	0.891***	1.256***	1.260***	0.727*
	(0.165)	(0.155)	(0.162)	(0.160)	(0.262)
Earned 12+ credit hours	0.070***	0.048**	0.082***	0.073***	0.046*
	(0.011)	(0.013)	(0.014)	(0.019)	(0.017)
Earned 15+ credit hours	0.033**	0.026*	0.043***	0.043***	0.018
	(0.009)	(0.011)	(0.007)	(0.009)	(0.016)
Earned 2/3 of credit hours attempted	0.049**	0.060**	0.062***	0.084***	0.034*
	(0.016)	(0.018)	(0.016)	(0.017)	(0.016)
Observations	**5273**	**4613**	**3789**	**3362**	**3811**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 5: Propensity Score Matching

	(1)	(2)
Loan Outcomes		
Any loans	-0.075***	-0.070
	(0.017)	(0.070)
Federal subsidized loan	-0.051*	-0.039*
	(0.022)	(0.019)
Federal unsubsidized loan	-0.096***	-0.091
	(0.025)	(0.070)
Federal PLUS loan^	-0.027***	-0.031***
	(0.007)	(0.007)
Other loans	-0.022*	-0.022**
	(0.008)	(0.008)
Total loan amount	-529.268***	-519.638*
	(79.868)	(202.573)
Federal subsidized loan amount	-165.550***	-135.977***
	(43.401)	(37.883)
Federal unsubsidized loan amount	-174.921***	-171.185
	(53.092)	(189.491)
Federal PLUS loan amount^	-109.671***	-123.289***
	(25.430)	(32.005)
Other loans amount	-79.126**	-89.187***
	(25.916)	(23.345)
Academic Outcomes		
GPA at institution	-0.005	0.093
	(0.140)	(0.073)
Attempted course count	0.093	0.262***
	(0.242)	(0.067)
Credit hours attempted	-0.319	-0.123
	(0.385)	(0.388)
Attempted 12+ credit hours	0.055***	0.059***
	(0.014)	(0.012)
Attempted 15+ credit hours	0.038	0.082***
	(0.067)	(0.023)
Credit hours earned	0.132	0.785
	(0.904)	(0.505)
Earned 12+ credit hours	0.057	0.095**
	(0.069)	(0.030)
Earned 15+ credit hours	0.052	0.096***
	(0.067)	(0.027)
Earn 2/3 of attempted credit hours	0.025	0.057*
	(0.066)	(0.023)
Observations	5273	5273

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester. We use a logit model to predict each student's propensity score. We match on race, sex, FRPM status, high school GPA, high school attended, graduating cohort, first-generation student status, and first college attended, Pell status, Pell amount and Pell missing indicators in both columns. In col 1, we put EFC into 1k and 2k bins while we put EFC into 1k and 5k in col 2. Standard errors are reported in parentheses and clustered at the high school level. ^USG only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 6: Coefficient Stability Test

Explanatory variable = Scholarship receipt	Uncontrolled β	Uncontrolled R-squared	Controlled β	Controlled R-squared	R-max	δ for β=0
	(1)	(2)	(3)	(4)	(5)	(6)
Loan outcomes						
Any loans	-0.017	0.260	-0.074	0.336	0.437	-0.993
Federal subsidized loan	0.073	0.283	-0.025	0.363	0.472	-0.194
Federal unsubsidized loan	-0.074	0.230	-0.104	0.305	0.397	-2.632
Federal PLUS loan^	-0.052	0.096	-0.044	0.116	0.151	2.655
Other loans	-0.020	0.051	-0.019	0.061	0.080	6.429
Total loan amount	-525.086	0.204	-608.712	0.285	0.370	-2.764
Federal subsidized loan amount	61.972	0.289	-104.013	0.366	0.476	-0.458
Federal unsubsidized loan amount	-252.301	0.162	-254.589	0.225	0.292	-6.301
Federal PLUS loan amount^	-251.062	0.044	-175.112	0.071	0.092	2.517
Other loans amount	-83.695	0.028	-74.997	0.040	0.052	5.435
Academic outcomes						
GPA at institution	0.242	0.214	0.106	0.413	0.537	-1.212
Number of courses	0.321	0.274	0.249	0.395	0.514	2.057
Credit hours attempted	0.616	0.148	0.546	0.245	0.318	3.643
Attempted 12+ credit hours	0.095	0.235	0.067	0.417	0.543	2.260
Attempted 15+ credit hours	0.033	0.119	0.022	0.156	0.203	0.832
Credit hours earned	1.539	0.187	1.042	0.358	0.465	65.334
Earned 12+ credit hours	0.104	0.191	0.070	0.326	0.424	-8.542
Earned 15+ credit hours	0.036	0.092	0.033	0.172	0.224	-5.554
Earn ⅔ of attempted credit hours	0.103	0.158	0.049	0.285	0.370	-25.799
Observations	5273		5273			

Note: Following Oster (2019), we use psacalc Stata Command to estimate the stability of coefficients from the first columns of Table (2) and (4). By computing Oster's δ (col 6), the analysis assesses how much stronger unmeasured and omitted covariates must be, relative to measured and included covariates, to explain away the findings. This δ is derived by comparing the results of the uncontrolled regression (col 1 & 2) to those of the controlled regression (col 3 & 4). We set the maximum possible R-squared (col 5) as 1.3 times the R-squared from the controlled regression (col 4) as recommended in Oster (2019). Each row shows a distinct regression estimate and associated δ for a different outcome variable. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for the last 2 high school years, had a high school GPA of 75 or higher, and enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control for financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. ^USG only.

Table 7: Impact of AATL Scholarship by Merit Aid

	HOPE Scholarship (1)	Zell Miller Scholarship^ (2)	No HOPE & Zell Miller (3)
Loan Outcomes			
Any loans	-0.101	0.021	-0.051***
	(0.054)	(0.037)	(0.011)
Federal subsidized loan	-0.002	0.122	-0.035*
	(0.040)	(0.062)	(0.013)
Federal unsubsidized loan	-0.147*	-0.074	-0.064***
	(0.063)	(0.051)	(0.010)
Federal PLUS loan^	-0.035*	-0.137	-0.031*
	(0.013)	(0.099)	(0.012)
Other loans	-0.024*	0.006	-0.017
	(0.010)	(0.005)	(0.009)
Total loans amt	-644.606**	-435.411*	-528.656***
	(175.298)	(185.385)	(58.957)
Federal subsidized loans amt	-50.323	151.031	-118.611**
	(66.966)	(130.240)	(39.812)
Federal unsubsidized loans amt	-356.441***	-198.137	-176.226***
	(89.703)	(99.512)	(31.254)
Federal PLUS loans amt^	-209.501***	-407.155**	-144.422**
	(52.312)	(110.240)	(44.714)
Other loans amt	-31.553	18.850	-102.226**
	(32.950)	(25.595)	(35.586)
Academic Outcomes			
GPA at institution	0.233**	-0.209**	0.075*
	(0.080)	(0.051)	(0.035)
Number of courses	0.323***	-0.132	0.250***
	(0.080)	(0.101)	(0.043)
Credit hours attempted	0.652**	0.403	0.590***
	(0.218)	(0.517)	(0.150)
12+ credit hours attempted	0.054**	0.017	0.073***
	(0.016)	(0.009)	(0.017)
15+ Credit hours attempted	0.032	-0.061	0.026
	(0.045)	(0.129)	(0.023)
Credit hours earned	1.477***	0.655	0.924***
	(0.374)	(0.754)	(0.191)
12+ credit hours earned	0.083**	0.111**	0.053***
	(0.027)	(0.034)	(0.013)
15+ credit hours earned	0.071*	-0.079	0.027**
	(0.026)	(0.066)	(0.010)
Earn 2/3 of attempted credit hours	0.078*	0.017	0.035
	(0.030)	(0.011)	(0.019)
Observations	1909	599	2749

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different subgroup of students by the type of merit aid they received or the absence of such aids. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. ^USG only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 8: Financial and Academic Outcomes by High School GPA

	HS GPA [75-80)	HS GPA [80-85)	HS GPA [85-90)	HS GPA [90-95)	HS GPA [95+)
	(1)	(2)	(3)	(4)	(5)
Loan outcomes					
Any loans	-0.066*	-0.053**	-0.066	-0.107	0.056
	(0.028)	(0.019)	(0.038)	(0.063)	(0.064)
Federal subsidized loans	-0.066*	-0.037	-0.003	0.026	0.121
	(0.029)	(0.018)	(0.028)	(0.048)	(0.079)
Federal unsubsidized loans	-0.081**	-0.062**	-0.094*	-0.190*	-0.004
	(0.024)	(0.021)	(0.038)	(0.074)	(0.071)
Federal PLUS loans^	-0.057*	-0.019	-0.002	-0.079*	-0.039
	(0.021)	(0.014)	(0.012)	(0.032)	(0.044)
Other loans	0.000	-0.016	-0.042*	0.000	-0.001
	(0.018)	(0.015)	(0.015)	(0.012)	(0.002)
Total loan amount	-539.177**	-498.204***	-466.871**	-760.569**	-279.416
	(144.267)	(68.905)	(122.079)	(239.095)	(230.077)
Federal subsidized loan amount	-138.409	-130.509*	-62.207	-13.776	179.970
	(67.730)	(46.296)	(53.884)	(98.188)	(99.838)
Federal unsubsidized loan amount	-204.022**	-152.657***	-249.854***	-394.939**	-134.704
	(54.812)	(34.922)	(52.676)	(122.131)	(134.936)
Federal PLUS loan amount^	-228.143*	-100.761	-45.969	-358.957**	-298.363**
	(88.962)	(48.823)	(67.843)	(125.599)	(87.413)
Other loans amount	8.571	-121.965	-114.573**	0.967	-26.319
	(34.776)	(61.768)	(38.033)	(79.832)	(21.750)
Academic outcomes					
College GPA	0.004	0.149***	0.178*	0.181	-0.167*
	(0.098)	(0.038)	(0.083)	(0.102)	(0.062)
Number of courses attempted	0.114	0.365***	0.333***	0.416**	-0.042
	(0.080)	(0.059)	(0.068)	(0.130)	(0.158)
Number of credit hours attempted	0.207	0.794**	0.964**	1.855*	-2.997
	(0.159)	(0.234)	(0.333)	(0.825)	(1.407)
Attempted 12+ credit hours	0.032	0.089***	0.084**	0.077***	0.007*
	(0.038)	(0.021)	(0.023)	(0.019)	(0.002)
Attempted 15+ credit hours	-0.018	0.044	0.062	0.074	-0.101
	(0.027)	(0.028)	(0.041)	(0.057)	(0.085)
Number of credit hours earned	0.396	1.045***	1.719***	2.727**	-2.578
	(0.379)	(0.228)	(0.392)	(0.782)	(1.233)

Earned 12+ credit hours	0.006	0.060***	0.121***	0.126*	0.064**
	(0.028)	(0.014)	(0.024)	(0.052)	(0.016)
Earned 15+ credit hours	0.003	0.010	0.110***	0.057	-0.131*
	(0.020)	(0.013)	(0.016)	(0.041)	(0.054)
Earned 2/3 of credit hours attempted	0.010	0.044	0.093*	0.061	-0.004
	(0.036)	(0.028)	(0.033)	(0.033)	(0.005)
Observations	784	1481	1455	886	647

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia.Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. ^USG only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 9: Impact of AATL Scholarship by Sex

	Females (1)	Males (2)
Loan Outcomes		
Any loans	-0.076***	-0.073*
	(0.018)	(0.032)
Federal subsidized loan	-0.019	-0.038
	(0.015)	(0.032)
Federal unsubsidized loan	-0.116***	-0.090*
	(0.022)	(0.033)
Federal PLUS loan^	-0.026*	-0.073***
	(0.011)	(0.017)
Other loans	-0.022*	-0.014*
	(0.010)	(0.006)
Total loans amt	-564.361***	-665.320***
	(71.024)	(99.610)
Federal subsidized loans amt	-108.181*	-100.522
	(42.442)	(58.084)
Federal unsubsidized loans amt	-280.336***	-223.163***
	(42.895)	(32.114)
Federal PLUS loans amt^	-95.468*	-313.117***
	(37.082)	(58.966)
Other loans amt	-85.738*	-58.650
	(31.085)	(32.657)
Academic Outcomes		
GPA at institution	0.068	0.153**
	(0.036)	(0.040)
Number of courses	0.252***	0.224***
	(0.047)	(0.046)
Credit hours attempted	0.504***	0.569
	(0.109)	(0.279)
12+ credit hours attempted	0.068**	0.064**
	(0.018)	(0.018)
15+ Credit hours attempted	-0.001	0.047
	(0.022)	(0.033)
Credit hours earned	0.934***	1.131***
	(0.224)	(0.284)
12+ credit hours earned	0.052***	0.098***
	(0.012)	(0.020)
15+ credit hours earned	0.018	0.050
	(0.013)	(0.026)
Earn 2/3 of attempted credit hours	0.030	0.075**
	(0.021)	(0.022)
Observations	3175	2094

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different subgroup of students by sex.. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. ^USG only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.00$.

Table 10: Scholarship impact on other aid and institutional grants

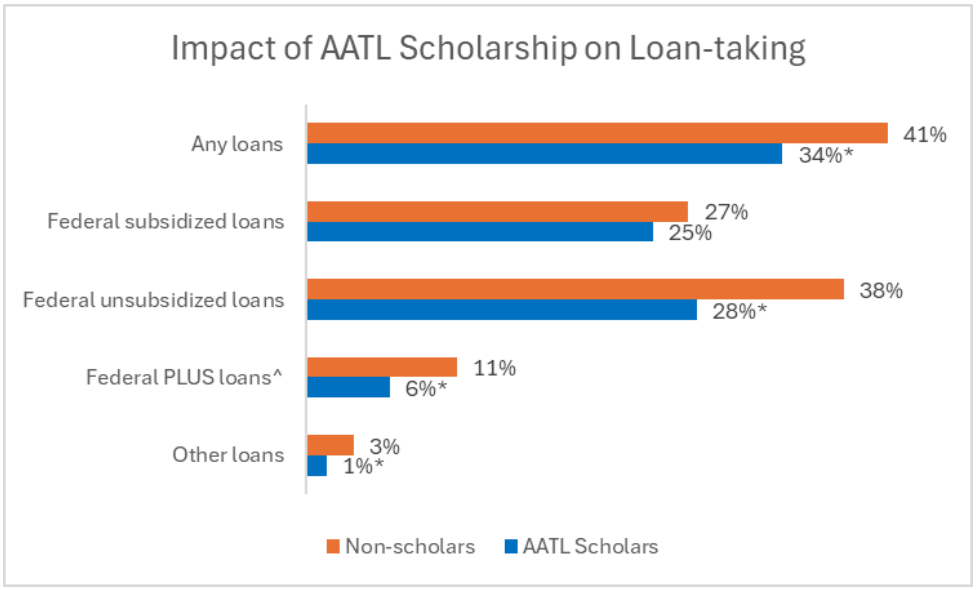
Subsample	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
USG only					
Any institution grant	0.002	-0.002	0.002	-0.001	0.004
	(0.007)	(0.008)	(0.009)	(0.010)	(0.010)
Athletic grant	-0.005	-0.006	-0.003	-0.004	-0.001
	(0.003)	(0.004)	(0.004)	(0.005)	(0.003)
Need-based institution grant	0.005	0.004	-0.003	-0.004	0.011
	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)
Non-need-based institution grant	0.002	-0.000	0.005	0.004	-0.004
	(0.008)	(0.008)	(0.009)	(0.009)	(0.010)
Amt of any institution grant awarded	-32.341	-44.628	-25.004	-35.276	-17.747
	(17.785)	(22.109)	(17.071)	(21.098)	(32.221)
Amt of athletic grant awarded	-9.166	-12.997	-9.273	-12.751	-6.593
	(8.310)	(10.003)	(10.569)	(13.177)	(13.997)
Amt of need-based institution grant awarded	11.556	11.419	-8.933	-13.104	22.738*
	(8.326)	(9.475)	(6.785)	(9.449)	(8.793)
Amt of non-need-based institution grant awarded	-34.765	-43.080	-6.826	-9.442	-33.969
	(18.993)	(22.521)	(12.935)	(14.339)	(27.392)
Observations	**4981**	**4488**	**3786**	**3362**	**3626**
USG + TCSG					
Any aid except Pell	0.193***	0.179***	0.214***	0.187***	0.172***
	(0.022)	(0.024)	(0.021)	(0.026)	(0.019)
Any grant/scholarships except Pell	0.461***	0.487***	0.519***	0.524***	0.437***
	(0.019)	(0.019)	(0.016)	(0.020)	(0.017)
Amt of total aid except Pell	596.433***	602.477***	598.138***	629.710***	471.017***
	(92.058)	(94.495)	(103.300)	(95.074)	(68.145)
Amt of total grant/scholarships except Pell	1209.594***	1336.611***	1254.490***	1352.811***	1199.560***
	(48.576)	(44.706)	(44.907)	(43.192)	(47.839)
Amt of total aid except Pell and AATL	1652.392***	1850.434***	1759.045***	1971.195***	1737.863***
	(72.462)	(109.705)	(77.049)	(116.517)	(90.733)
Amt of total grant/scholarships except Pell and AATL	510.712***	578.159***	493.206***	546.713***	560.460***

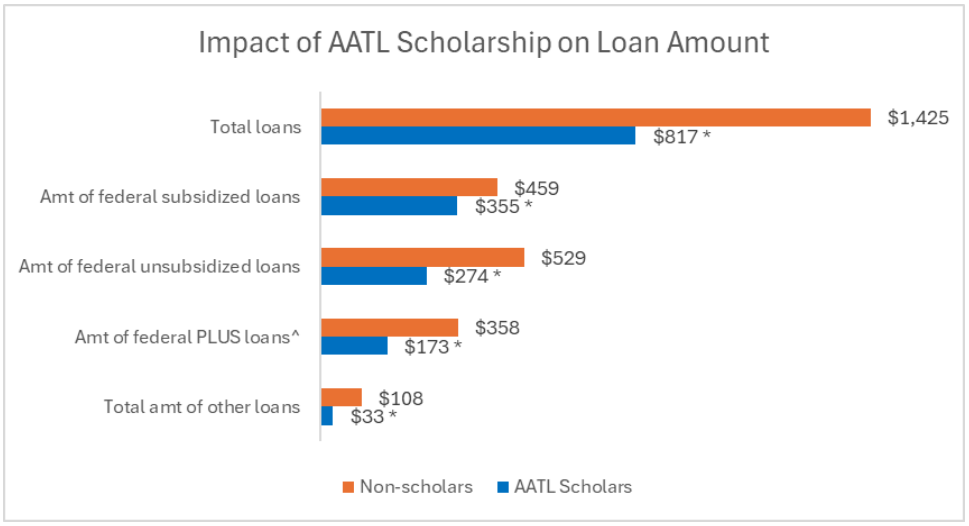
	(30.276)	(42.299)	(40.921)	(51.889)	(42.237)
Observations	**5273**	**4613**	**3789**	**3362**	**3811**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia.Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Appendix

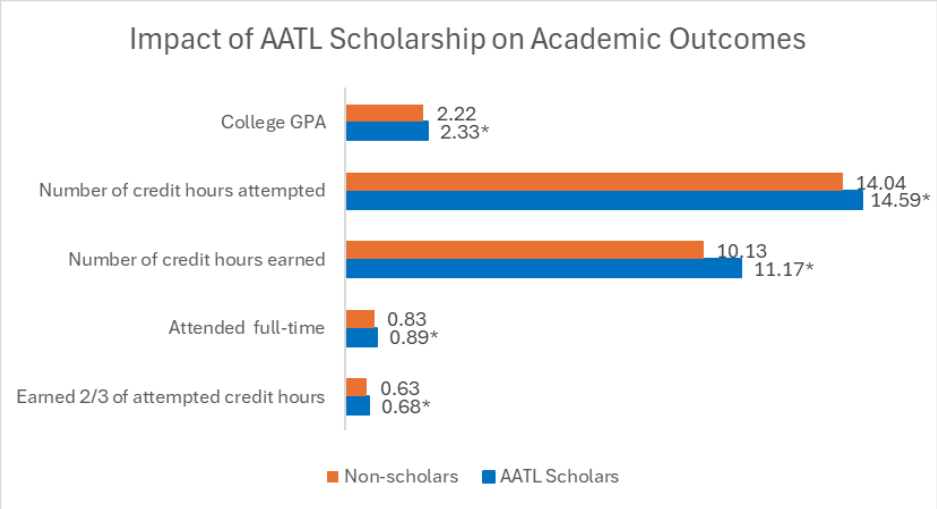
Appendix Figure 1: Loan Outcomes at the End of the First Semester in College





Notes: Includes APS graduates between the spring of 2016 and 2021 cohorts who attended APS for at least 2+ years prior to graduating and had a high school GPA of 75 or higher. The bars representing Non-scholars show the average of loan-taking or loan amount among those who did not receive the AATL scholarship. The bar representing AATL scholars show the estimated amount of loan-taking or loan amount associated with the AATL scholarship receipt which we calculated by adding the estimates reported in the first column of Table (2) and the average loan outcomes of non-scholars. All outcome variables are measured at the first postsecondary institution enrolled at the first term. * significant at 5 percent or lower. ^USG only.

Appendix Figure 2: Academic Outcomes at the End of the First Semester in College



Notes: Includes APS graduates between the spring of 2016 and 2021 cohorts who attended APS for at least 2+ years prior to graduating and had a high school GPA of 75 or higher. The bars representing Non-scholars show the average academic outcomes among those who did not receive the AATL scholarship. The bar representing AATL scholars show the estimated academic outcomes associated with the AATL scholarship receipt, which we calculated by adding the estimates reported in the first column of Table (4) and the average academic outcomes of non-scholars. All outcome variables are measured at the first postsecondary institution enrolled at the first term. * significant at 5 percent or lower.

AT1: Summary Statistics on Outcome Variables

Outcomes	Full Sample	Scholar	Non-scholar
Financial Indicators			
Any loans	0.463	0.500	0.411
Total loan more than $2500	0.337	0.357	0.308
Total loan more than $5000	0.055	0.030	0.091
Federal subsidized loan	0.398	0.489	0.270
Federal unsubsidized loan	0.386	0.390	0.380
Federal PLUS loan^	0.073	0.050	0.106
Other loans	0.024	0.018	0.033
Any grants except Pell	0.490	0.733	0.150
Pell grant	0.722	0.936	0.421
Any institution grants/scholarships^	0.091	0.098	0.080
Athletic grants^	0.006	0.006	0.007
Need-based institution grants^	0.027	0.038	0.011
Non-need-based institution grants^	0.064	0.064	0.064
Financial amounts			
Total loan amount	1429.798	1432.939	1425.404
Federal subsidized loan amount	657.427	799.356	458.869
Federal unsubsidized loan amount	483.042	450.214	528.967
Federal PLUS loan amount^	687.312	824.098	487.304
Other loans amount	73.010	48.161	107.775
Total grants amount except Pell	1221.275	1832.028	231.946
Pell grant amount	1922.294	2551.985	1041.356
Total institution grants amount^	130.849	132.660	128.202
Athletic grants amount^	19.274	21.429	16.122
Need-based institution grants amount^	36.418	51.797	13.931
Non-need-based institution grants amount^	75.067	59.281	98.149
Academic			
GPA at institution	2.167	2.127	2.224
Number of courses	4.980	5.119	4.784
Credit hours attempted	14.366	14.596	14.042
12+ credit hours attempted	0.875	0.911	0.825
15+ credit hours attempted	0.432	0.456	0.398
Credit hours earned	10.472	10.715	10.130
12+ credit hours earned	0.521	0.531	0.508
15+ credit hours earned	0.230	0.233	0.226
Earn 2/3 of attempted credit hours	0.639	0.649	0.626
Observations	**5273**	**3075**	**2198**

Note: The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. ^USG only.

AT2: Persistence Outcomes

Sample Specification	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Free/reduced lunch status		**X**						
Attending fulltime			X				X	
EFC<=8000				X			X	
Applied to AATL					X	X		
Students with EFC=0						X		
HS GPA 75+							X	X
Persist to 2nd term	0.142***	0.167***	0.129***	0.164***	0.169***	0.221***	0.150***	0.141***
	(0.024)	(0.025)	(0.023)	(0.024)	(0.028)	(0.040)	(0.025)	(0.024)
Persist to 2nd year	0.097***	0.109***	0.085**	0.109***	0.108*	0.121	0.081*	0.096***
	(0.020)	(0.025)	(0.024)	(0.023)	(0.040)	(0.060)	(0.030)	(0.020)
Persist to 3rd year	0.098***	0.109***	0.094***	0.110***	0.102**	0.074*	0.109***	0.100***
	(0.020)	(0.021)	(0.021)	(0.024)	(0.032)	(0.032)	(0.023)	(0.020)
Persist to 4th year	0.100***	0.094***	0.103***	0.088***	0.110**	0.058	0.087**	0.102***
	(0.022)	(0.018)	(0.024)	(0.021)	(0.033)	(0.032)	(0.025)	(0.022)
Observations	**2525**	**1943**	**2242**	**1991**	**1831**	**1241**	**1698**	**2447**
Complete BA Degree^	0.055**	0.058***	0.059**	0.061***	0.048*	0.062*	0.074***	0.056**
	(0.016)	(0.012)	(0.017)	(0.014)	(0.020)	(0.022)	(0.019)	(0.016)
Complete BA in 3 years^	-0.003	0.000	-0.003	0.002	-0.001	0.002	0.002	-0.003
	(0.004)	(0.002)	(0.004)	(0.001)	(0.008)	(0.001)	(0.002)	(0.004)
Complete BA in 4 years^	0.026*	0.037**	0.029*	0.027*	0.024	0.032	0.034*	0.027*
	(0.011)	(0.010)	(0.013)	(0.011)	(0.014)	(0.017)	(0.014)	(0.011)
Complete BA in 5 years+	0.089*	0.098**	0.098*	0.133***	0.049	0.115*	0.159**	0.045***
	(0.036)	(0.026)	(0.042)	(0.032)	(0.040)	(0.054)	(0.044)	(0.009)
Complete AA Degree	0.014	0.023	0.011	0.019	0.015	0.016	0.016	0.014
	(0.011)	(0.011)	(0.011)	(0.011)	(0.014)	(0.025)	(0.011)	(0.011)
Complete AA in 3 years	0.021*	0.028**	0.017	0.028**	0.017	0.033*	0.024*	0.021*
	(0.008)	(0.009)	(0.009)	(0.009)	(0.010)	(0.013)	(0.010)	(0.008)
Any Degree in 4 years	0.033**	0.048***	0.035*	0.042***	0.034	0.046*	0.049**	0.034**
	(0.011)	(0.009)	(0.015)	(0.010)	(0.016)	(0.021)	(0.014)	(0.010)
Observations	**2535**	**1951**	**2245**	**1996**	**1837**	**1242**	**1698**	**2456**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2018 who attended APS for at least the last two years of high school and had a high school GPA of 70 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Persistence outcomes are defined as continuing to enroll in the same institution as the first college. Completion outcomes are defined as receiving a degree from the same institution as the first college. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. ^USG only. + USG only and outcomes are observed for 2016 APS graduation cohort only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

AT3: Impact of Scholarship on College Type (USG only)

Subsample and Specification	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Controls for EFC	X	X	X	X	X
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
Outcomes					
Enrolled in college, Avg. SAT 900	-0.004	-0.005	-0.009	-0.008	-0.012
	(0.006)	(0.007)	(0.007)	(0.009)	(0.008)
Enrolled in college, Avg. SAT 1000	0.004	0.004	0.007	0.008	-0.007
	(0.007)	(0.008)	(0.008)	(0.009)	(0.010)
Enrolled in college, Avg. SAT 1100	0.010	0.019	0.010	0.022	-0.001
	(0.017)	(0.018)	(0.020)	(0.020)	(0.019)
Enrolled in college, Avg. SAT 1200	-0.001	-0.001	0.001	0.001	-0.003
	(0.003)	(0.004)	(0.002)	(0.003)	(0.004)
Observations	**4981**	**4488**	**3786**	**3362**	**3626**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level.. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

AT4: Control means for Loan Taking

Subsample and Specification	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
<u>Outcomes</u>					
Any loans	0.411	0.457	0.516	0.593	0.478
Total loans less than 2500	0.308	0.341	0.455	0.528	0.401
Total loans less than 5000	0.091	0.105	0.124	0.150	0.139
Federal subsidized loans	0.270	0.290	0.505	0.579	0.357
Federal unsubsidized loans	0.380	0.430	0.473	0.551	0.439
Federal PLUS loans^	0.106	0.120	0.085	0.107	0.142
Other loans	0.033	0.031	0.040	0.047	0.046
Total loan amount	1425.404	1585.660	2029.743	2367.999	1947.903
Federal subsidized loan amount	458.869	489.085	914.985	1038.600	618.939
Federal subsidized loan amount	528.967	594.516	667.964	780.234	685.260
Federal PLUS loan amount^	358.322	404.053	321.290	404.825	548.344
Other loans amount	107.775	110.932	126.231	144.340	145.278
Observations	**2198**	**1813**	**884**	**680**	**736**

Note: The control sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher but did not receive the Achieve Atlanta Scholarship. The sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. ^USGonly.

AT5: Cumulative Loan at first college

Subsample and Specification	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
Outcomes					
Any loans	-0.029	-0.045	-0.021	-0.027	-0.029
	(0.014)	(0.022)	(0.021)	(0.028)	(0.019)
Subsidized loans	0.010	0.002	-0.017	-0.021	0.006
	(0.014)	(0.022)	(0.018)	(0.025)	(0.017)
Unsubsidized loans	-0.063***	-0.084**	-0.055*	-0.065*	-0.074**
	(0.016)	(0.023)	(0.020)	(0.026)	(0.020)
PLUS loans	-0.044***	-0.054***	-0.033*	-0.040**	-0.058***
	(0.008)	(0.010)	(0.012)	(0.014)	(0.011)
Other loans	-0.028**	-0.032**	-0.035***	-0.041***	-0.035*
	(0.009)	(0.008)	(0.008)	(0.009)	(0.013)
Cumulative amt of total loans	-1229.075***	-1693.459***	-1136.990**	-1353.633**	-2235.532***
	(306.167)	(429.239)	(364.280)	(429.998)	(495.217)
Cumulative amt of Subsidized loans	354.253*	278.888	63.650	38.096	138.058
	(154.200)	(202.826)	(171.519)	(197.947)	(222.362)
Cumulative amt of Unsubsidized loans	-522.954***	-693.818***	-274.962*	-330.941*	-799.387**
	(134.005)	(175.869)	(107.838)	(128.534)	(243.607)
Cumulative amt of PLUS loans	-599.042***	-751.971***	-373.935**	-465.726**	-960.461***
	(146.765)	(182.556)	(111.146)	(128.220)	(231.234)
Cumulative amt of other loans	-469.525***	-538.789***	-539.938**	-574.835**	-620.201**
	(121.800)	(124.809)	(178.758)	(179.561)	(175.367)
Observations	**5273**	**4613**	**3789**	**3362**	**3811**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. Cumulative loans are the accumulation of loans at the first postsecondary institution attended for as many semesters as attended. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or Technical College System of Georgia. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

AT6: Control means for Academic Outcomes

Subsample and Specification	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
Outcomes					
GPA at institution	2.224	2.419	1.549	1.650	2.010
Number of courses	4.784	5.185	4.671	5.165	4.729
Credit hours attempted	14.042	15.391	12.998	14.600	13.801
12+ credit hours attempted	0.825	1	0.769	1	0.808
15+ Credit hours attempted	0.398	0.483	0.339	0.441	0.412
Credit hours earned	10.130	11.561	7.156	8.357	9.379
12+ credit hours earned	0.508	0.616	0.283	0.368	0.444
15+ credit hours earned	0.226	0.274	0.111	0.144	0.219
Earned 2/3 of attempted credit hours	0.626	0.690	0.430	0.466	0.560
Observations	**2198**	**1813**	**884**	**680**	**736**

Note: The control sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school, had a high school GPA of 75 or higher, but did not receive the Achieve Atlanta Scholarship. The sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation.

AT 7: Academic Outcomes in Second Semester

Subsample and Specification	(1)	(2)	(3)	(4)	(5)
Only students who attend college full-time		X		X	
Only students with EFC<=8000			X	X	
Only students who applied to AATL					X
Outcomes					
Cumulative GPA at Institution	0.004	0.019	0.044	0.066	-0.050
	(0.034)	(0.030)	(0.033)	(0.032)	(0.061)
Cumulative Credit Hours Attempted	1.316***	0.695**	1.339***	0.921***	0.961
	(0.277)	(0.210)	(0.260)	(0.218)	(0.471)
Cumulative Credit Hours Earned	1.520***	1.160**	1.659***	1.630***	0.925
	(0.341)	(0.348)	(0.360)	(0.377)	(0.630)
Observations	**4397**	**4020**	**3166**	**2925**	**3223**

Note: Each row shows a distinct regression estimate for a different outcome variable, and each column shows a different sample specification. The analysis sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school and had a high school GPA of 75 or higher. The analysis sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia and persisted on to the second semester at the same institution. Outcomes are measured at the first college attended in the second semester, which restricts the sample to only those who continue enrolling in the same institution. We control for demographics, such as gender, race, eligibility for free or reduced lunch in high school and first generation college student status. We also control financial-need such as Pell Grant status, amount of Pell Grant, amount of Expected Financial Contribution (EFC) and indicator for missing Pell or EFC status. We include fixed effects for high school GPA, high school attended, graduating cohort and first college attended. Standard errors are reported in parentheses and clustered at the high school level. ^USG only. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

AT8: Control Means by High School GPA

Outcomes	HS GPA [75-80)	HS GPA [80-85)	HS GPA [85-90)	HS GPA [90-95)	HS GPA [95+)
Loan Outcomes					
Any loans	0.471	0.442	0.360	0.370	0.389
Federal subsidized loan	0.452	0.370	0.263	0.150	0.075
Federal unsubsidized loan	0.442	0.387	0.320	0.352	0.377
Federal PLUSloan^	0.124	0.073	0.048	0.130	0.145
Other loans	0.051	0.051	0.040	0.012	0.006
Total loan amount	2020.625	1756.740	1337.720	1308.673	648.522
Federal subsidized loan amount	812.430	650.241	449.103	240.107	71.758
Federal unsubsidized loan amount	679.185	599.429	519.312	574.312	284.919
Federal PLUS loan amount^	513.592	351.539	256.870	428.545	263.218
Other loans amount	104.562	202.354	127.847	70.951	28.627
Academic Outcomes					
GPA at institution	1.217	1.484	2.110	2.995	3.512
Attempted course count	4.467	4.335	4.768	5.185	5.262
Credit hrs attempted	12.130	12.385	14.134	16.454	15.835
12+ credit hours attempted	0.679	0.706	0.835	0.951	0.994
15+ credit hours attempted	0.298	0.290	0.472	0.578	0.423
Credit hrs earned	5.381	6.744	10.063	14.620	15.139
12+ credit hours earned	0.174	0.264	0.502	0.786	0.901
15+ credit hours earned	0.067	0.116	0.212	0.422	0.375
Earn 2/3 of attempted credit hrs	0.306	0.410	0.635	0.884	0.982
Observations	507	473	400	327	496

Note: The control sample consists of Atlanta Public Schools graduates from 2016-2021 who attended APS for at least the last two years of high school, had a high school GPA of 75 or higher, but did not receive the Achieve Atlanta Scholarship. The sample is further restricted to students who enrolled in a postsecondary institution within the University System of Georgia or the Technical College System of Georgia. Outcomes are measured at the first postsecondary institution enrolled in the first semester which is either Fall or Spring semester following their high school graduation. ^USG only