# Impacts of Transfer Admissions Requirements: Evidence from Georgia*

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**Abstract**

One-third of all post-secondary students transfer colleges and roughly two-thirds of public four-year colleges require a minimum college GPA to be eligible for transfer admissions. Yet, little is known about how these policies influence who, when, and where students transfer. This paper studies the minimum transfer admissions requirements at institutions within the University System of Georgia. At the GPA thresholds, I estimate that the probability of transferring within one year of earning 30 credits increases by 0.5 to 3.1 percentage points, or about 67 to 200 percent, depending on the GPA threshold and student group analyzed. The short term transfer impacts persist over time, but are far less distinct. These results suggest that (a) minimum transfer GPA requirements often generate excess demand for attendance at these institutions, which may have important implications for college match and access to selective colleges and (b) minimum transfer GPA requirements can influence both the timing of transfers and whether students ever transfer.

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# 1 Introduction

About one-third of all post-secondary students in the United States transfer at least once (Shapiro et al., 2018),[1] and transfer may be even more common among students who eventually complete a bachelor's degree (Andrews, Li, and Lovenheim, 2014).[2] Unlike freshman admissions, the most important factor in transfer admissions is typically college grades received at previous institution(s) (Clinedinst and Patel, 2018). Additionally, many colleges and university systems use GPA-based minimum transfer admissions criteria. These policies require students to have a cumulative college GPA above a certain threshold to be eligible for admissions where students' transfer credits from their previous institution. While there are no existing statistics on the prevalence of the use of minimum transfer GPA requirements, as far as I'm aware, visiting websites of a 20 percent random sample of public four-year colleges reveals that about two-thirds of these institutions explicitly state that they use a minimum college GPA in their transfer admissions criteria.[3]

Despite the prevalence of college transfers and the use of minimum transfer GPA criteria among four-year colleges, little is known about how these transfer admissions policies influence who, when, and where students transfer. Strict admissions thresholds can create inefficiencies in the college matching process, potentially creating barriers in the access to selective colleges and academic match. In this paper, I study how the minimum transfer GPA requirements at institutions within the University System of Georgia (USG) impact transfer patterns within the system. The USG requires its research universities to have a minimum transfer GPA of at least 2.3 and its state and comprehensive universities to have a minimum transfer GPA of at least 2.0. These minimum GPA requirements apply

[1] The share of students who transfer is relatively consistent across different datasets, including among students in Texas public institutions at 31 percent (Andrews, Li, and Lovenheim, 2014), the National Longitudinal Survey of Youth 1997 cohort at 27 percent (Dillon and Smith, 2020), the National Educational Longitudinal Study at 33 percent (Goldrick-Rab and Pfeffer, 2009), the High School & Beyond Survey at 22 percent (Hilmer, 2000), and National Student Clearinghouse data at 38 percent Shapiro et al. (2018).

[2] Among students at Texas public institutions, Andrews, Li, and Lovenheim (2014) show that 49 percent of BA recipients had transferred at least once.

[3] Author's calculation using the Integrated Postsecondary Education Data System to obtain a list of public four-year colleges.

for students who have completed at least 30 credits. USG's two most selective institutions, the University of Georgia (UGA) and the Georgia Institute of Technology (Georgia Tech), set their minimum transfer GPAs higher than what USG requires, at 3.2 and 3.0, respectively.

My analysis first notes that 22 percent of students within USG who complete at least 30 credits later transfer to another USG institution. This is striking since these students are official transfer admits (i.e., taking completed credits from one institution to another), rather than simply enrolling in multiple institutions over time which is often how transfer rates are calculated. Moreover, much of the attention on college transfers in the literature focuses on transfers from two-year to four-year colleges. Since USG institutions primarily grant bachelor's degrees, this finding contributes to the literature by highlighting that transfers between four-year colleges is also common and emphasizes that this student population warrants further study. I also find that most of these transfers are conceivably "upward" transfers, where students move to an institution with a higher institutional sector classification within USG (e.g., transfers from a state college to a university), which highlights how these transfer admissions policies may be important for access to more selective colleges.

Second, I examine the transfer impacts of the minimum transfer GPA requirements across institutions. I use a regression discontinuity (RD) research design that compares students with GPAs at 30 credits that are just above and just below the minimum GPAs to be eligible to transfer to different institutions within USG. I find that, in most cases, these GPA requirements do influence transfer patterns, at least in the short run. I find effects at the threshold on the probability a students transfers within one year of earning 30 credits at each minimum transfer GPA threshold, except for Georgia Tech. Estimated transfer impacts vary between 0.5 to 3.1 percentage points, depending on the GPA threshold and student group analyzed. These are large effects in percent terms, representing between about 67 to 200 percent increases relative to means just below the thresholds.

These short run transfer effects persist over time. Estimates of the effects on whether students ever transfer after earning 30 credits are of a similar or slightly smaller magnitude to the estimates of effects on transfers within one year. However, the relationships between GPAs at 30 credits and

ever-transfer rates are far less distinct. These patterns may occur because students have many opportunities to transfer and can improve their GPAs over time. These results suggest that the minimum GPA requirements can have an effect on both when students transfer and whether students ever transfer.

Overall, this paper contributes to a literature that studies how admissions and other related policies influence transfers. For example, a small literature exists that studies how state articulation agreements, which makes explicit which course credits can transfer from community colleges, affects college transfer patterns (Anderson, Sun, and Alfonso, 2006; Baker, 2016; Boatman and Soliz, 2018; Shaat, 2020). I advance this literature by considering the effects of minimum transfer admissions requirements.[4] The findings demonstrate that these minimum transfer GPA requirements generate excess demand for attendance at many of these institutions. Lowering the GPA thresholds, providing exemptions for students close to the thresholds, or removing them altogether could increase transfer enrollment at these institutions if they are not already facing capacity constraints. My results also show that the transfer GPA requirements not only affect transfers to the institution(s) that the GPA requirements determine transfer eligibility for, but they also affect whether students transfer to *any* USG institution. This advances our understanding of college transfer preferences, since it suggests that when students find themselves barely ineligible for transfer admissions to a given institution based on their GPA, they do not immediately transfer to another institution that they are eligible to transfer to.

The excess demand for transfer admissions below the GPA thresholds may also have implications for institutions in crafting their student population. Figure A2 shows that college GPA has a negative relationship with the share of students of an underrepresented race/ethnicity and a positive relationship with family income. This implies there are relatively more lower-income students and students of an underrepresented race/ethnicity below each threshold than above. Thus, the excess demand

[4]The only other paper in this vein is Andrews (2016), which studies a program that grants guaranteed transfer admissions to the University of Texas at Austin for students who were not admitted as freshmen but who enroll in another institution within the University System of Texas and who maintain a minimum GPA.

below the transfer admissions thresholds also possibly represents an alternative pathway to support a diverse student population.

These findings are also important in light of the potential for college transfers to be beneficial for students' long term outcomes. There are many reasons why students may decide to transfer colleges which suggest transfers could be beneficial. College investment decisions occur in a dynamic setting and students may decide to change schools after periodically reassessing the costs and benefits of their investment options (see e.g., Manski (1989), Altonji (1993), and Stange (2012)). In terms of costs, students may transfer to lower their tuition or living expenses or improve their financial aid package. For benefits, students may transfer to reach a higher quality college or obtain a better academic match after learning more about their own aptitudes and the academic rigors of their current and prospective colleges. For example, Dillon and Smith (2020) find evidence that transfers tend to reduce gaps between student ability and college quality.[5] Lastly, recent research demonstrates that there is a large consumption value of college which suggests that students could also transfer colleges to better match their social and consumption preferences (Jacob, McCall, and Stange, 2018; Gong, Lochner, Stinebrickner, and Stinebrickner, 2021).

This paper provides a potential road map for researchers to estimate causal effects of college transfers on student success outcomes such as bachelor's degree attainment. Several papers estimate how transfer and non-transfer students perform in college, typically relying on matching or selection-on-observables research designs (Hilmer, 2000; Light and Strayer, 2004; Andrews et al., 2014). Many institutions and systems seem to use minimum college GPA requirements in determining eligibility for transfer admissions. While it is difficult to generalize my results, it seems likely that minimum GPA requirements have impacts on transfer patterns in other contexts as well. Thus, with the appropriate data, opportunities potentially exist to estimate how transfers impact student outcomes using a two-

[5]Specifically, Dillon and Smith (2020) find that undermatched students (i.e., relatively high ability students who enroll in relatively lower-quality colleges) have a higher conditional probability of transferring to a higher-quality college; though overmatched students (i.e., relatively low ability students who enroll in relatively higher-quality colleges) do not have a similarly higher conditional probability of transferring to a lower-quality college.

stage RD design that uses whether students are above or below the transfer GPA threshold as an instrument for whether students actually transfer.[6]

# 2 Background and Data

## 2.1 The University System of Georgia and higher education in Georgia

The USG currently consists of 26 public institutions. Based on each institution's specific mission and function,[7] these institutions are grouped into four sectors: research universities, comprehensive universities, state universities, and state colleges.[8] While teaching is a core focus at all USG institutions, the four sectors differ in their emphasis on research and the types of degree offered. Research is emphasized the most at research universities, followed in order by comprehensive universities and state universities. Research and comprehensive universities typically do not offer associate degree programs but do offer master's-level and doctoral programs. State universities offer undergraduate and master's-level programs, while typically having very few or limited doctoral or associate degree programs. State colleges offer bachelor's and associate degree programs, as well as general education courses, but offer no graduate programs. Some state colleges offer mostly associate degree programs and only a few select, professionally-oriented bachelor's degree programs.

Currently, most of USG's institutions primarily grant bachelor's degrees; however, a few institutions were classified as two-year colleges (which only offer sub-baccalaureate awards) during the first few years of the data. Each of these institutions was subsequently either reclassified as a state college or was consolidated with another state college or state university.

Other than USG institutions, Georgia also has 31 private colleges and universities and 22 public

[6]The data requirements for this two-stage RD design are steep. Indeed, the current context was not able to support my attempts of the study of second stage outcomes due to lack of power and/or a relatively weak first stage.

[7]Due to consolidations, some institutions have a "blended" function, where institutions serve the functions of multiple sectors. Institutions that operate with a blended function currently include Georgia State University, Albany State University, Middle Georgia State University, and the University of North Georgia.

[8]Currently, there are four research universities, four comprehensive universities, nine state universities, and nine state colleges.

technical colleges in the Technical College System of Georgia (TCSG) that offer certificate, diploma, and associate degree programs. Among public high school graduates in Georgia who attend college immediately after high school, about 63 percent enroll in an institution in the USG, 13 percent enroll in an institution in the TCSG, 9 percent enroll in a Georgia private institution, and 15 percent enroll in an out-of-state institution.[9]

## 2.2 Minimum transfer admissions requirements

According to USG policy, institutions must set minimum transfer admissions requirements based on their institutional sector. The admissions criteria exists for multiple reasons, including: i) to increase the chances for student success at the receiving institution, ii) to support a rational allocation of students across the system in the presence of capacity constraints, and iii) to limit excessive enrollment churn within the system. For the three types of universities, USG requires setting a minimum college GPA that students must have for transfer admissions consideration. Specifically, USG's minimum transfer admissions requirements for each institutional sector as follows:

- Research universities must have a minimum transfer GPA of at least 2.3.
- Comprehensive and state universities must have a minimum transfer GPA of at least 2.0.
- State colleges must require that students be eligible to continue or return to their sending institution.

Institutions can set minimum transfer admissions requirements that are higher than what USG requires. UGA and Georgia Tech do this, with minimum transfer GPAs of 3.2 and 3.0, respectively. Importantly, the GPA criteria only apply to students with at least 30 transferrable credit hours. Students with fewer credit hours are subject to the freshman admissions requirements at each institution (e.g., SAT/ACT scores). Finally, the GPA requirements are minimum admissions criteria, so meeting an institution's GPA requirement does not guarantee transfer admission to that institution.

[9]These numbers are calculated from the High School Graduate Outcomes dashboard of the Governor's Office of Student Achievement: https://gosa.georgia.gov/dashboards-data-report-card/data-dashboards/hs-grad-outcomes.

## 2.3 Data, sample description, and transfer student characteristics

This paper uses USG administrative data between 2007 and 2019. These data include student-by-term enrollment records, allowing identification of all student transfers between USG institutions during this period. The data also contain students' cumulative GPAs at the end of each term, which is critical for determining students' eligibility for transfer admissions to different institutions. I follow students' enrollment histories at all USG institutions and track whether, when, and where students transfer between institutions.[10] I observe transfers by using an identifier that indicates whether students were admitted as a transfer student. Thus, I focus on officially recorded transfers, where students transfer credits from previous institution(s), as opposed to simply observing whether students enroll in multiple institutions over time.

I make three restrictions to the data to create the full analysis sample. First, I limit the analysis to students who enter a USG institution as a first-time freshman in order to exclude students who may have entered USG as transfer students from outside USG and other types of students. Second, I restrict the analysis to students who enter a USG institution between the Fall 2007 and Fall 2013 terms to allow students sufficient time to progress through a degree program. Finally, I limit the analysis to students who have earned at least 30 credit hours, since these are the students who are plausibly subject to USG's minimum transfer admissions requirements.

Table 1 shows average characteristics and student outcomes of the full sample, as well as for populations of students who transfer by destination institution and for students who do not transfer. Within the full sample, 31 percent of students identify with a race/ethnicity that are underrepresented (URM) and 56 percent completed a bachelor's degree.[11] Transfer and non-transfer students are very similar on average in terms of demographics. For instance, URM students make up 32 percent of transfer students and 31 percent of non-transfer students.

There are substantial differences in transfer student characteristics by the transfer institution

[10] A weakness of the data is that I do not observe student enrollments in institutions outside of the USG. All outcomes, such as degree completion or transfers, can only be observed if they occur within the USG.

[11] I classify students as URM if they identify as Black, Hispanic, or Native American.

destination. Students who transfer to the University of Georgia are more likely to be male, White, and have a higher adjusted gross income (AGI) than other students and other transfer students. Students who transfer to Georgia Tech are more likely to be male, Asian, and have a higher AGI; the proportion of Georgia Tech transfer who are male is especially striking at 88 percent. In contrast, students who transfer to Georgia State University or any comprehensive university, state university, or state college are more likely to be female, URM, and have a lower AGI than other students and other transfer students.

Table 1 also shows that transfers in this context tend to be "upward" transfers (i.e., transfers to an institution with a higher sector classification). Overall, two-thirds of all transfers can be considered upward transfers. For example, aggregating across transfer students to the three research universities in columns (4) through (6), about 93 percent transfer from an institution with a lower sector classification, and 50 percent transfer from a state college or two-year college. Meanwhile, in column (7), 64 percent of students who transfer to any state or comprehensive university transfer from a state college or two-year college. These statistics demonstrate that transfers often provide students alternative paths to more selective colleges.

# 3 Methodology

The different minimum transfer GPAs across institutions within the USG create four distinct transfer admissions thresholds: UGA at 3.2, Georgia Tech at 3.0, Georgia State University at 2.3,[12] and all state and comprehensive universities at 2.0. Table 2 shows average student characteristics and outcomes within the full sample (students who have earned at least 30 credits) as well as within the subsamples used in the regression discontinuity analyses at each of the four transfer admissions thresholds. These

[12] Although a 2.3 GPA is USG's required minimum for research universities, the University of Georgia and Georgia Tech set higher thresholds. Accordingly, we only consider this 2.3 GPA threshold for transfers to Georgia State University. There is a fourth research university, Augusta University; however, we do not analyze the effects of the transfer GPA requirements at Augusta University because it enrolls a modest number of undergraduate students during the time period of our analysis data set.

"RD samples" include all students whose GPA at 30 credits are within 0.4 GPA points of the transfer GPA thresholds.

Strikingly, within the full sample, 22 percent of USG students transfer to another USG institution after earning 30 credits. Much of the literature on college transfers focuses on transfers from 2-year to 4-year colleges. Since the vast majority of USG students are seeking bachelor's degrees, this finding highlights that transfers between 4-year colleges is also common. The differences across RD samples reflect the relationships between students' GPAs and their characteristics and outcomes. The students in the higher GPA samples are more likely to be female, white, and have higher family incomes than the students in the lower GPA samples.

## 3.1 RD specification

I use a regression discontinuity design, where students' GPAs at 30 credits is the running variable, to identify the effect of the four separate minimum transfer GPA requirements. The intuition is to compare two groups of students who are similar to each other on average except that only one group has a GPA that makes them eligible for transfer admissions to a particular institution. The estimating equation is:

$$Transfer_{ic}^{j} = \alpha \cdot \mathbb{1}[GPA_i \geq T^j] + f(GPA_i - T^j) + \delta_c + \mu_{ic}, \quad \text{with} \quad |GPA_i - T^j| \leq k \tag{1}$$

$Transfer_{ic}^{j}$ indicates whether student $i$ in entry cohort $c$ transferred to institution (or group of institutions) $j$ after earning 30 credits. $GPA_i$ is student $i$'s GPA at the end of the term in which students' earn 30 credits. $T$ is the minimum transfer GPA threshold for institution(s) $j$. I treat $f(GPA_i - T^j)$ as linear and allow the slope to vary on either side of each cutoff.

I estimate Equation 1 separately for each of the four transfer admissions thresholds. These estimates are obtained within a bandwidth, $k$. For the main results, I report estimates using a bandwidth

of 0.4 GPA points around each threshold, which is roughly the median of the computed optimal bandwidths across thresholds and transfer outcomes (Calonico, Cattaneo, Ferrell, and Titiunik, 2017). Table A3 shows that most estimates are fairly consistent across smaller or larger bandwidths. I report robust standard errors clustered by the GPA running variable.

At the thresholds, students gain eligibility for transfer admissions consideration at institution(s) $j$. Thus, $\alpha$ captures the effect of access to transfer to institution(s) $j$ on the eligibility margin and we can interpret any observed "jump" in transfer rates that occurs at a given GPA threshold as the effect of the minimum GPA requirement. Additionally, a jump in the transfer rate at a GPA threshold would illustrate that there likely are students who desire to transfer but are unable to do so because their GPA makes them barely ineligible.

## 3.2 RD diagnostics

Two conditions must hold in order for the RD design to produce valid estimates of the effect of being above the transfer admissions thresholds: i) students do not finely manipulate their GPAs (at 30 credits) specifically to make themselves eligible for transfer admissions, and ii) all other observed or unobserved factors that might predict transfer are smooth through the thresholds.

I test for manipulation by examining the density of students' GPAs at 30 credits. Traditional density tests (e.g., McCrary (2008); Cattaneo, Jansson, and Ma (2018)) are unhelpful here due to the discrete nature of grades, which I discuss more below. Thus, I rely on other analyses to investigate possible manipulation. Figure A1 shows that there are clear jumps in the density of students' GPAs at (or slightly above) a GPA of 2.0 and 3.0. These jumps would be problematic for the research design if they occur due to students attempting to gain eligibility for transfer admissions. However, I argue that these jumps are likely the result of other reasons.

First, the 2.0 and 3.0 GPAs are important for reasons unrelated to transfer admissions. A 3.0 GPA is required for students to maintain eligibility for the HOPE Scholarship, Georgia's generous merit-based financial aid program. Also, a 2.0 GPA is typically required to maintain satisfactory academic

progress and retain eligibility for federal financial aid.[13] It is possible that the jumps in densities at 2.0 and 3.0 are related to the incentives created by these other programs.

Second, certain GPAs—particularly round number GPAs—are mechanically more likely to occur because, due to the discrete nature of grades, there are simply more combinations of grades that compute to GPAs at round numbers as opposed to decimal GPAs (Zimmerman, 2014; Barreca, Lindo, and Waddell, 2016). Ost, Pan, and Webber (2018) illustrate this directly by showing that jumps in GPA densities at round numbers persist even when grades are randomly assigned. Figure A1 shows that jumps in the GPA density—similar in size to the jump at 2.0—also exist at GPAs of 2.25, 2.5, 2.75, 3.25, 3.5 and 3.75, none of which are relevant for transfer admissions within USG or other state-wide policies or programs, as far as I am aware. Excluding observations with GPAs exactly equal to these multiples of 0.25 (Panel (b)) reveals a much smoother distribution. I later report results using this "donut" sample as a robustness check.

Importantly, while there are jumps in the density of GPAs at 30 credits at 2.0 and 3.0, there are no observed jumps at GPAs of 2.3 or 3.2. If students were finely manipulating their GPAs in response to the transfer admissions thresholds, it seems unlikely this manipulation would occur at the transfer admissions thresholds for Georgia Tech and state and comprehensive universities, but not at the thresholds for Georgia State and UGA.

Finally, I attempt "placebo" tests by comparing the full sample density of GPAs to the density of GPAs around the institution-specific transfer thresholds for students who were already enrolled at the relevant institution at 30 credits (Panels (c) through (e)). The intuition is that students should not exhibit manipulation around a transfer admissions threshold to an institution they are already attending. Institution-specific GPA distributions around the relevant thresholds that are similar to the full sample distributions would provide evidence that manipulation is not a significant issue. Indeed, the institution-specific GPA densities in the neighborhoods of the relevant thresholds for students at

[13] Students typically do not immediately lose federal financial aid eligibility once their GPA falls below 2.0. Students typically first receive a warning and have at least one term to improve their GPA above 2.0 before losing federal aid eligibility. Even then, students often have the ability to appeal to received aid while being put on academic probation.

UGA, Georgia Tech, and Georgia State display similar patterns to the full sample densities. Together, I interpret these findings to suggest that the jumps at 2.0 and 3.0 are likely unrelated to manipulating GPAs to gain transfer eligibility.

The other necessary condition is that nothing else changes discontinuously at the thresholds that would affect the probability a student transfers. I provide evidence that this assumption is satisfied by running placebo checks that use available predetermined covariates—including gender, race, family income, high school GPA, and maximum SAT scores—as outcomes in the RD specification in Equation 1. Estimates from these regressions are presented in Table A1 and the graphical relationships are shown in Figure A2. None of these covariates change discontinuously at any of the four transfer admissions thresholds.

# 4 Results

## 4.1 Main results

The main results are presented graphically in Figure 1 and the regression estimates are reported in columns 1 and 2 of Table 3. For each of the four admissions thresholds, I analyze two outcomes: whether students ever transfer after earning 30 credits and whether students transfer within one year after earning 30 credits. Analyzing both these shorter-run and longer-run transfer outcomes helps to assess how the minimum GPA requirements affect the timing of transfers.

I focus first on the transfer impacts of the University of Georgia's minimum GPA requirement in Panel (a) of Figure 1. Overall, transfer rates are relatively low, because only one transfer destination institution is included in the transfer rate, and the sample includes students from all other USG institution when they earn 30 credits. At the 3.2 GPA threshold, there is a sharp and distinct jump in the probability of transferring to UGA within one year of earning 30 credits. Just below the threshold, about 1 percent of students transfer, while 3.1 percent transfer just at the threshold. This indicates that students just above UGA's transfer eligibility threshold at 30 credits are three times more likely

to transfer there within one year than students just below the threshold.

These short-run transfer impacts also appear to persist in the long run. At the 3.2 GPA threshold, there is still a small discontinuous jump in transfer rates by about 1.5 percentage points, but the relationship has become much less distinct. A substantial number of students were below UGA's 3.2 GPA threshold at 30 credits but eventually transferred to UGA. This is likely due to the dynamic nature of college transfer opportunities. Students can attempt to transfer in nearly any term. A student who is ineligible to transfer to UGA at one point in time may become eligible at a later point in time by improving their GPA in future terms. As the later analyses will indicate, this pattern where the effects of the minimum transfer GPA requirements are more distinct in the short run than in the long run is consistent across different institutions and types of institutions.

Next, I consider the impact of Georgia Tech's 3.0 minimum transfer GPA requirement in Panel (b). Here, I observe no effect of being above Georgia Tech's threshold on transfer either within one year or ever after earning 30 credits. I cannot determine from the data why there is an effect of other minimum transfer GPA requirements but not Georgia Tech's threshold. One potential reason could be that Georgia Tech is so selective with transfer admissions that students generally need a much higher GPA to be competitive.[14] Institutional and curricular factors at Georgia Tech, which offers relatively distinct majors with specific pre-requisites, could also be at play.

Panel (c) illustrates the transfer impacts of the minimum GPA requirements to transfer to Georgia State. Students just above a 2.3 GPA at 30 credits are less than one percentage point more likely to transfer to Georgia State than students just below. Although, this represents nearly a 100 percent increase. The effect on ever-transfer rates to Georgia State is of a similar magnitude as the jump in transfer rates within one year. Although, similar to the impact of the UGA's minimum GPA, the relationship is less distinct in the long run. Finally, Panel (d) assess the impact of the 2.0 GPA requirement to transfer to any state or comprehensive university. Because I am considering transfers to many in-

[14]According to institution's reported information from the Common Data Set (see Table A2), Georgia Tech's transfer acceptance rate during the 2018-19 academic year was about 30 percent, compared to 63 and 76 percent at Georgia State and UGA, respectively.

stitutions here, overall transfer rates are much higher than in previous figures. Having a GPA just above the 2.0 GPA threshold at 30 credits increases the probability of transfer to a state or comprehensive university within one year by about two percentage points (or roughly 67 percent). The effect for ever-transfer rates is also roughly two percentage points, although this relationship again is less distinct than with transfer rates within one year.

Lastly, I consider whether the institution-specific transfer impacts of the minimum GPA requirements carryover to the broader transfer patterns within the system. To do this, I repeat the RD analyses while replacing the institution-specific transfer indicators with an indicator for whether students transfer to *any* institution within USG. The results are presented graphically in Figure 2 and estimates reported in columns 3 and 4 of Table 3.

The results show that the three transfer admissions thresholds with institution-specific transfer impacts documented above also have impacts on transfers to any USG institution, at least in the short run. Moreover, these impacts on transfers to any USG institution are of a similar magnitude as the institution-specific transfer impacts. This indicates that the local effects of these transfer GPA requirements are also meaningful in determining broader transfer patterns within USG. It also suggests that students' transfer preferences may often be limited to a single institution, since students' typically do not immediately transfer to another institution when they are barely ineligible to transfer to a given institution.

## 4.2 Robustness checks

Table A3 tests how robust the main results are to alternative bandwidth choices. Results using different sized bandwidths are reported across the columns. Panel A shows that estimates of transfer impacts within one year of earning 30 credits are robust to bandwidth choice. Panel B shows the estimates of impacts on ever transferring after earning 30 credits. These results are considerably more "fuzzy" than the short-run results and some estimates are less robust to very small bandwidth choices. In particular, the ever transfer impacts at the 2.3 and 2.0 GPA thresholds attenuate and become sta-

tistically insignificant with very small bandwidths. However, the estimates for ever transfer impacts around the 3.2 GPA thresholds are robust across bandwidths.

Table A4 reports results using the "donut" RD samples. For reasons discussed in subsection 3.2, these regressions exclude from the sample students with GPAs exactly equal to round numbers and GPAs at multiples of 0.25. The results using this alternative sample are very similar to the main estimates. Column 4 of Table A3 shows results that add demographic controls to Equation 1 using the main 0.4 GPA bandwidth. Estimates with these controls are identical to the estimates without them. Finally, column 5 of Table A3 uses a quadratic function of the running variable instead of a linear function. Here, while a couple estimates attenuate and lose statistical significance, most estimates are consistent with the main estimates.

## 4.3 Heterogeneous effects

In this subsection I analyze whether the minimum GPA requirements have heterogenous effects on transfer patterns by student subgroups. To do this, for each of the three transfer admissions thresholds that demonstrated transfer impacts, I estimate Equation 1 separately for multiple student subgroups, including by race/ethnicity, family income, and institution type. For race/ethnicity, I classify students as either URM or non-URM. For family income, I classify students as "higher" or "lower" income by whether their adjusted gross income was reported on their FAFSA (Free Application for Federal Student Aid) to be less than or greater than $60,000. Finally, for types of institutions, I observe the institutions students were enrolled in during the term in which they earned 30 credits and use USG's sector classifications. The graphical results of these analyses are reported in Figure 3, Figure 4, and Figure 5. I focus here on the heterogenous transfer impacts within one year of earning 30 credits where effects are most evident.

The results show that the transfer impacts of UGA's minimum GPA requirement are concentrated among non-URM and higher-income students. The increase in transfer rates at the threshold are 2.8 and 3.1 percentage points for non-URM and higher-income students, respectively, but only 1.0 and

1.4 for URM and lower-income students. Meanwhile, the transfer impacts of the minimum GPA requirements to transfer to Georgia State and any state or comprehensive university are somewhat larger for URM and lower-income students. Finally, transfer impacts across all three thresholds are generally largest among students at state colleges or two-year colleges, and there is generally little to no effects among students at research universities.

The data cannot determine the reasons for why some differences in transfer impacts of the minimum GPA requirements by student groups exist. However, it is worth noting that the patterns are generally consistent with the average characteristics of transfer students to these institutions presented in Table 1. It seems possible that these heterogeneous impacts reflect the differential demand across student groups to attend these institutions. Some potential partial explanations for these differences could be several institution-specific factors, including the cost of attendance across institutions, the characteristics of where institutions are located, and the availability of desired academic programs.

# 5 Discussion and Conclusion

Many U.S. college students will end up transferring between institutions at least once. This holds true even among students at the mostly bachelor's degree granting institutions within the USG: 22 percent of students transfer between USG institutions after earning 30 credits. Also, institutions often require students have a minimum cumulative college GPA in order to be eligible for transfer admissions. In this paper, I study how the minimum transfer admissions requirements at institutions within the USG influence transfer patterns within the system. I find that these requirements do appear to have an influence on the transfer patterns in the system. However, the transfer GPA requirements have a more significant effect on when students transfer as opposed to whether students are ever able to transfer.

My results suggest that many institutions that use minimum transfer GPA requirements could in-

crease transfer student enrollment by slightly adjusting the thresholds, allowing exemptions for students close to the threshold, or removing them entirely. Using strict GPA thresholds that determine transfer eligibility may reduce administrative burden by creating an easy way to limit admissions consideration costs, although the benefits are unclear. It is difficult to justify these thresholds on the basis of academic preparation, since students just below the thresholds are essentially the same, on average, as students just above.

A critical need for future research is developing credible evidence on how transfers, and different kinds of transfers, impact student success outcomes. With the right data and context, this paper demonstrates that minimum transfer GPA requirements may provide a potential opportunity to begin to tackle this important question. There are many reasons why transfer could have positive or negative effects on student outcomes. Understanding whether, and in what situations, transfers tend to be beneficial for college students would create new implications for transfer admissions and other related policies. And since college transfers often involve differences in the selectivity of the sending and receiving college, this area of research has implications for understanding the mechanisms behind how college characteristics and academic match operate as inputs of long-run outcomes.

# References


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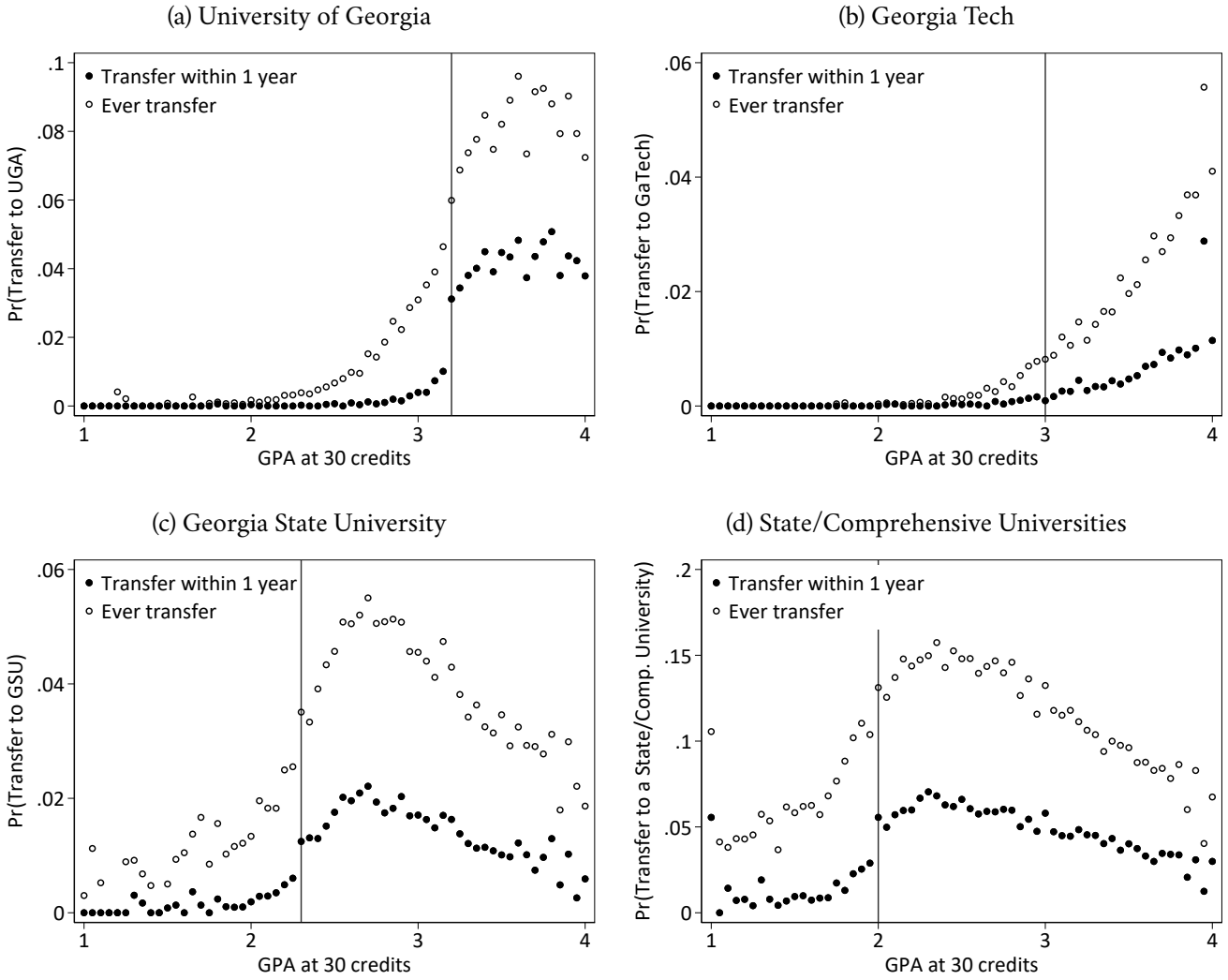
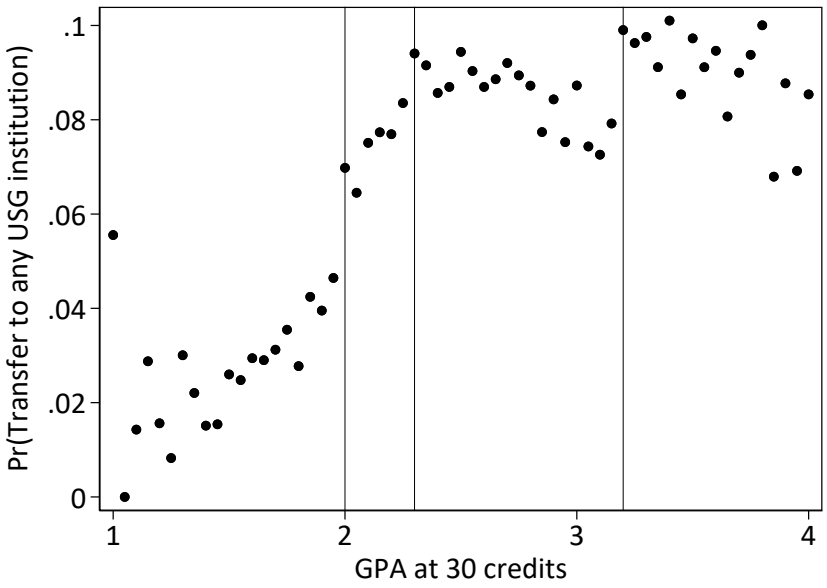
# Figures

Figure 1: Transfer impacts of minimum GPA requirements



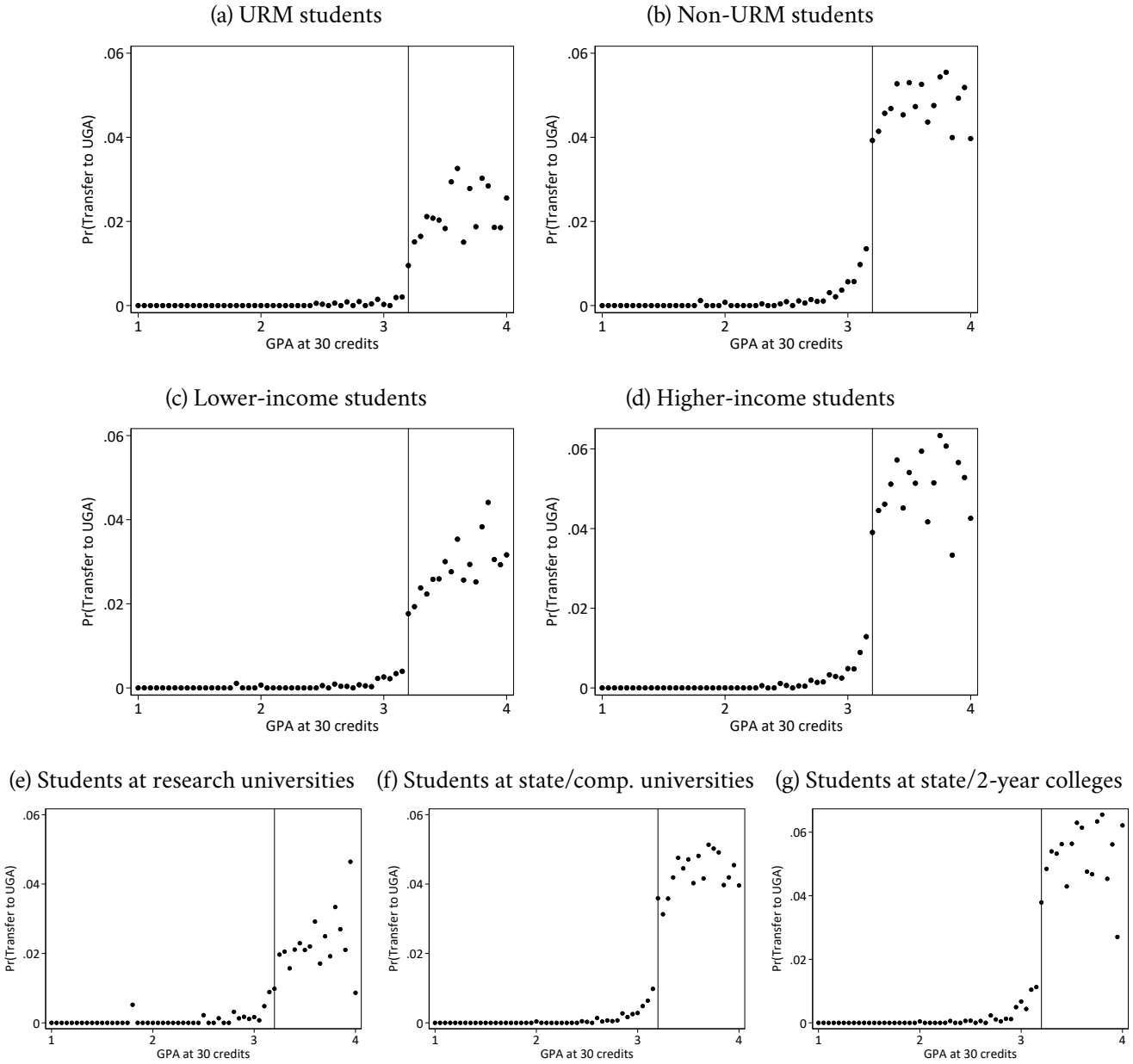

*Notes*: This figure shows graphical relationships between transfer outcomes and students GPAs at 30 credits, which are placed in bins of 0.05 GPA points. The solid dots show rates of whether students transfer within 1 year of earning 30 credits. The hollow dots show whether students *ever* transfer after earning 30 credits. The vertical lines represent the minimum transfer GPA threshold for each institution or group of institutions.

Figure 2: Impact of minimum GPA requirements on all transfers



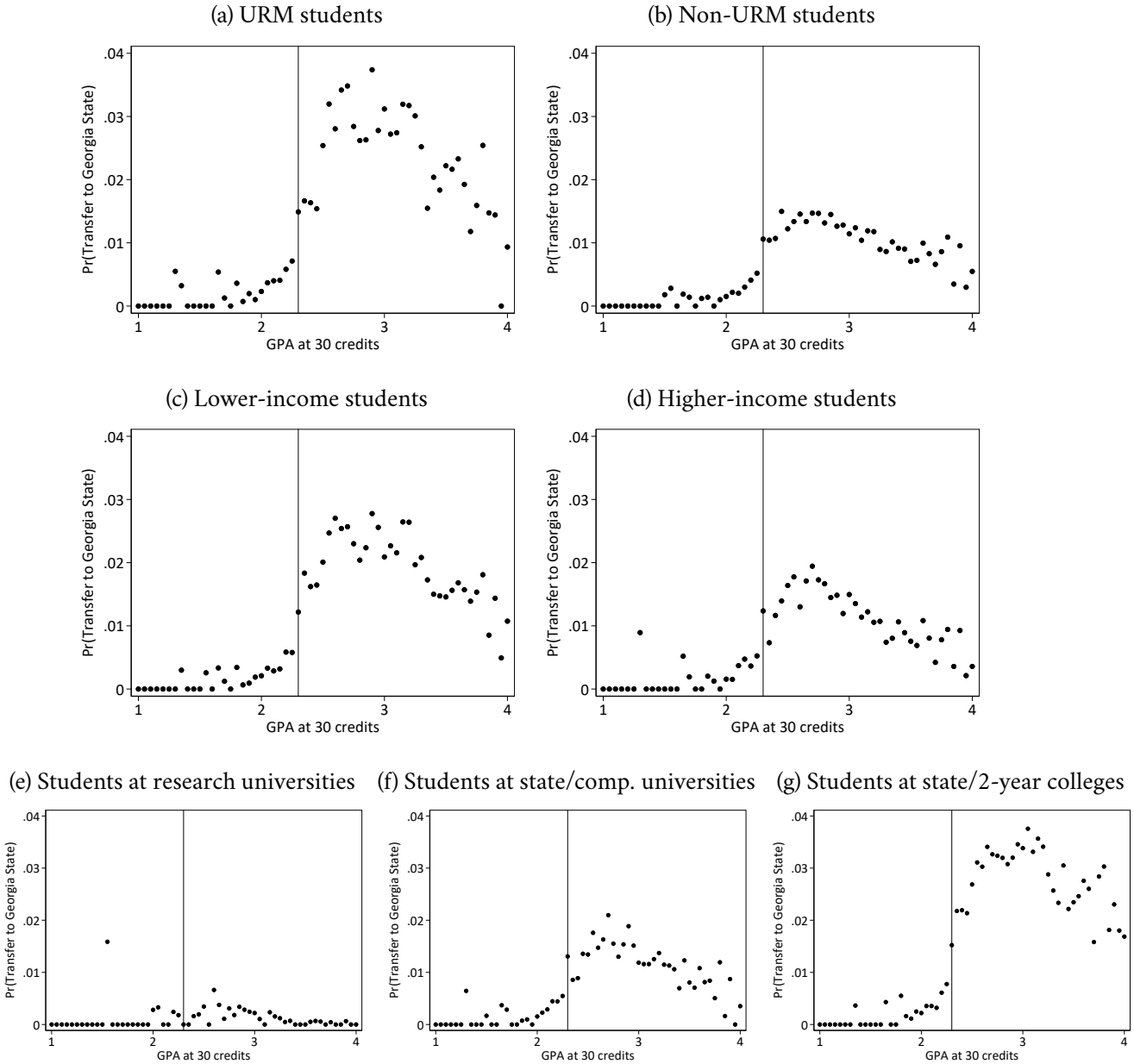

*Notes*: This figure shows the graphical relationship between whether students transfer to any USG institution within 1 year of earning 30 credits and their GPAs at 30 credits, which are placed in bins of 0.05 GPA points. The vertical lines show the three minimum transfer GPA thresholds where institution-specific transfer impacts were found (UGA at 3.2, Georgia State at 2.3, and state or comprehensive universities at 2.0.)

Figure 3: Heterogeneity in the impacts of UGA's minimum GPA requirement



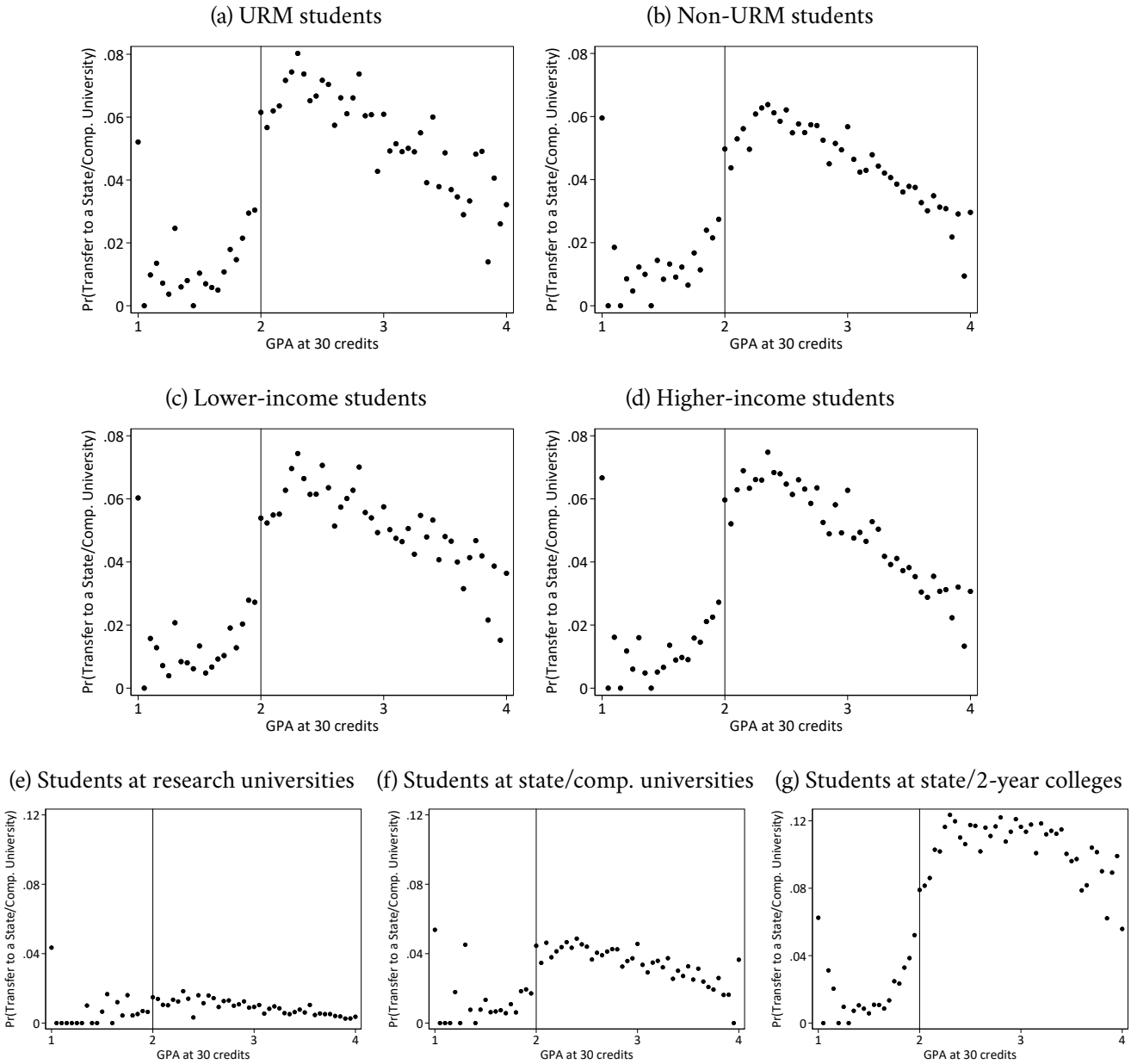

*Notes*: This figure shows the the heterogeneous impacts of UGA's minimum GPA requirement, where each panel represents a student subgroup. URM stands for underrepresented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Students are classified as lower or higher income based on whether their adjusted gross income was reported to be above or below $60,000.

Figure 4: Heterogeneity in the impacts of Georgia State's minimum GPA requirement




*Notes*: This figure shows the the heterogeneous impacts of Georgia State's minimum GPA requirement, where each panel represents a student subgroup. URM stands for underrepresented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Students are classified as lower or higher income based on whether their adjusted gross income was reported to be above or below $60,000.

Figure 5: Heterogeneity in the impacts of the minimum GPA requirement to transfer to state/comp. universities




*Notes*: This figure shows the the heterogeneous impacts of the minimum GPA requirement to transfer to a state or comprehensive university, where each panel represents a student subgroup. URM stands for underrepresented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Students are classified as lower or higher income based on whether their adjusted gross income was reported to be above or below $60,000.

# Tables

Table 1: Full sample and transfer student characteristics

| | | | Transfer students by transfer destination | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Full sample (1) | Non-transfer students (2) | Any (3) | UGA (4) | Georgia Tech (5) | Georgia State (6) | State or Comp. Univs. (7) | State Colleges (8) |
| *Demographics* | | | | | | | | |
| Female | 0.570 | 0.573 | 0.562 | 0.483 | 0.222 | 0.604 | 0.585 | 0.631 |
| White | 0.563 | 0.566 | 0.553 | 0.734 | 0.537 | 0.345 | 0.556 | 0.542 |
| Black | 0.246 | 0.243 | 0.258 | 0.059 | 0.110 | 0.357 | 0.301 | 0.300 |
| Asian | 0.058 | 0.068 | 0.069 | 0.089 | 0.208 | 0.126 | 0.036 | 0.046 |
| Other race | 0.029 | 0.030 | 0.026 | 0.023 | 0.026 | 0.038 | 0.024 | 0.024 |
| Unknown race | 0.035 | 0.034 | 0.036 | 0.038 | 0.046 | 0.048 | 0.030 | 0.042 |
| Hispanic | 0.059 | 0.059 | 0.058 | 0.057 | 0.073 | 0.087 | 0.052 | 0.046 |
| URM | 0.308 | 0.305 | 0.320 | 0.118 | 0.186 | 0.449 | 0.356 | 0.351 |
| *Background* | | | | | | | | |
| High school GPA | 3.229 | 3.267 | 3.094 | 3.273 | 3.378 | 2.940 | 3.047 | 3.072 |
| Max SAT score | 1,095 | 1,111 | 1,037 | 1,107 | 1,191 | 1,014 | 1,002 | 1,029 |
| AGI (in $1,000s) | $92.3 | $94.4 | $85.1 | $115.0 | $105.0 | $70.6 | $78.6 | $79.3 |
| Missing AGI | 0.102 | 0.111 | 0.068 | 0.090 | 0.093 | 0.064 | 0.060 | 0.068 |
| *Original institution* | | | | | | | | |
| Research university | 0.272 | 0.323 | 0.087 | 0.106 | 0.202 | 0.041 | 0.068 | 0.110 |
| Comp. university | 0.181 | 0.188 | 0.153 | 0.192 | 0.218 | 0.136 | 0.125 | 0.228 |
| State university | 0.245 | 0.257 | 0.205 | 0.259 | 0.286 | 0.190 | 0.173 | 0.256 |
| State college | 0.259 | 0.208 | 0.440 | 0.392 | 0.238 | 0.493 | 0.491 | 0.331 |
| Two-year college | 0.044 | 0.024 | 0.115 | 0.051 | 0.055 | 0.140 | 0.144 | 0.075 |
| Number of students | 284,375 | 222,088 | 62,287 | 9,822 | 3,492 | 9,249 | 32,100 | 6,178 |

*Notes*: This table shows average student characteristics, where each column refers to a student population. The sample includes all first-time freshman students entering between Fall 2007 and Fall 2013 who completed at least 30 credits. AGI stands for adjusted gross income. URM stands for underrepresented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Max SAT scores are calculated using SAT or ACT scores, where ACT scores are converted into the SAT scale using official concordance tables. AGI stands for adjusted gross income and is obtained from students's filings of the Free Application for Federal Student Aid.

Table 2: Regression discontinuity sample comparison

| | Full sample (1) | UGA RD sample [2.8,3.6] (2) | Georgia Tech RD sample [2.6,3.4] (3) | Georgia State RD sample [1.9,2.7] (4) | State/Comp. Univ. RD sample [1.6,2.4] (5) |
|---|---|---|---|---|---|
| *Demographics* | | | | | |
| Female | 0.570 | 0.593 | 0.581 | 0.530 | 0.509 |
| White | 0.563 | 0.606 | 0.576 | 0.458 | 0.418 |
| Black | 0.247 | 0.198 | 0.234 | 0.367 | 0.414 |
| Asian | 0.068 | 0.071 | 0.065 | 0.048 | 0.045 |
| Other race | 0.029 | 0.029 | 0.029 | 0.030 | 0.030 |
| Unknown race | 0.035 | 0.034 | 0.036 | 0.037 | 0.037 |
| Hispanic | 0.059 | 0.061 | 0.062 | 0.060 | 0.057 |
| URM | 0.309 | 0.262 | 0.299 | 0.431 | 0.475 |
| *Background* | | | | | |
| High school GPA | 3.229 | 3.327 | 3.241 | 2.942 | 2.856 |
| Max SAT score | 1,095 | 1,110 | 1,088 | 1,020 | 1,006 |
| AGI | $92,309 | $98,237 | $92,978 | $75,197 | $70,571 |
| Missing AGI | 0.102 | 0.099 | 0.095 | 0.094 | 0.097 |
| *Transfer Outcomes* | | | | | |
| Ever transfer | 0.219 | 0.232 | 0.233 | 0.217 | 0.190 |
| Transfer within 1 year | 0.083 | 0.088 | 0.087 | 0.082 | 0.066 |
| Number of students | 284,375 | 125,309 | 118,959 | 73,242 | 50,714 |

*Notes*: This table reports summary statistics for various analysis samples. Column 1 shows the full sample of students who earned at least 30 credits. Columns 2 through 5 show subsamples of students with GPAs at 30 credits within a 0.4 GPA-point bandwidth around the four minimum transfer GPA thresholds. URM stands for underrepresented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Max SAT scores are calculated using SAT or ACT scores, where ACT scores are converted into the SAT scale using official concordance tables. AGI stands for adjusted gross income and is obtained from students's filings of the Free Application for Federal Student Aid. Transfer rates are calculated using only transfers that occur after a student earns 30 credits.

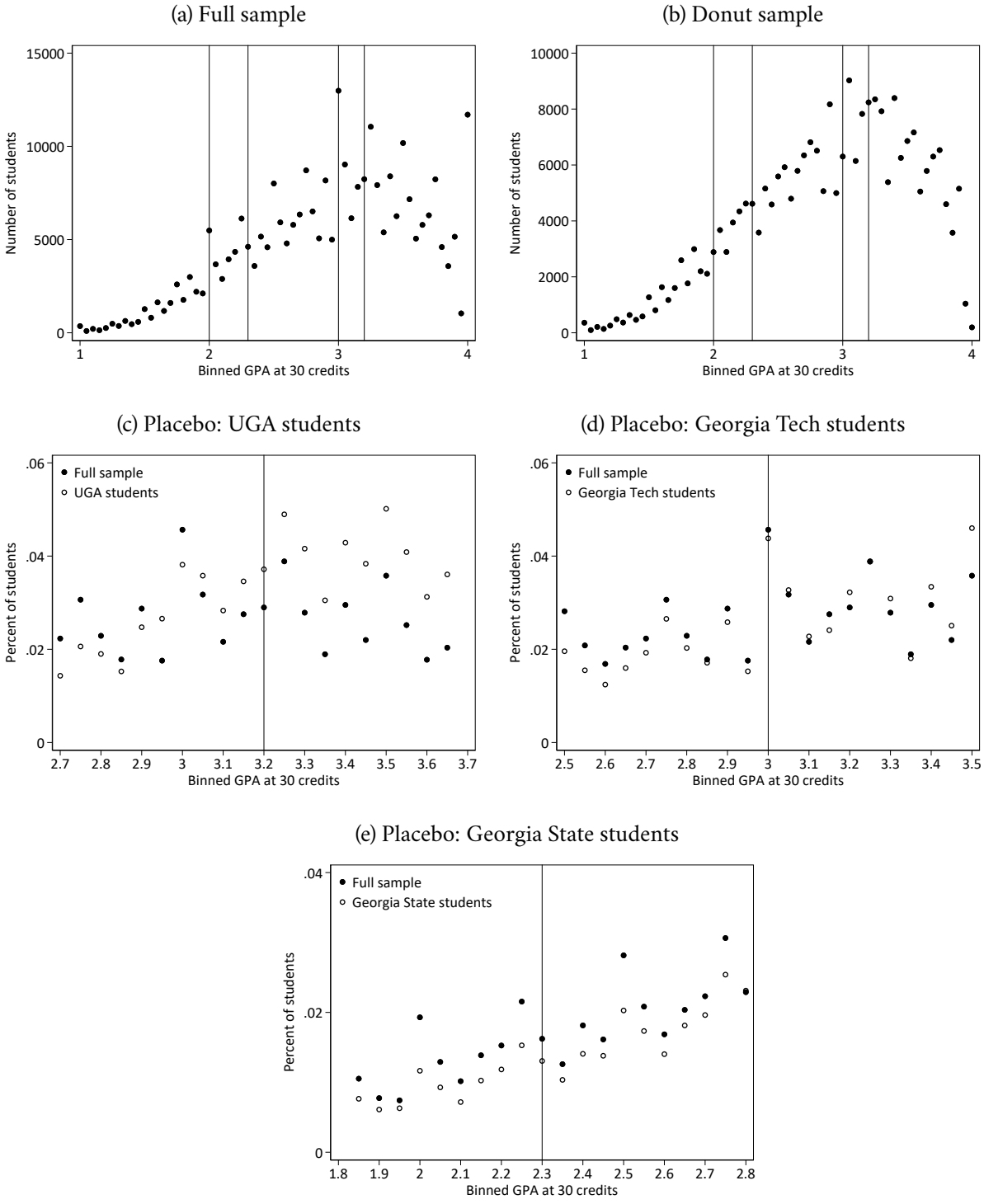
Table 3: Regression discontinuity estimates

| | Institution(s)-specific transfer | | Any transfer within USG | |
|---|---|---|---|---|
| | Within 1 year | Ever | Within 1 year | Ever |
| | (1) | (2) | (3) | (4) |
| Above 3.2 GPA (UGA) | 0.023*** | 0.017*** | 0.027*** | 0.011 |
| N = 106,184 | (0.002) | (0.003) | (0.005) | (0.007) |
| | [0.010] | [0.046] | [0.079] | [0.237] |
| Above 3.0 GPA (Georgia Tech) | 0.000 | -0.001 | 0.001 | 0.003 |
| N = 100,521 | (0.000) | (0.001) | (0.005) | (0.009) |
| | [0.001] | [0.008] | [0.075] | [0.214] |
| Above 2.3 GPA (Georgia State) | 0.005*** | 0.005** | 0.005 | 0.005 |
| N = 68,870 | (0.001) | (0.003) | (0.006) | (0.007) |
| | [0.006] | [0.026] | [0.084] | [0.210] |
| Above 2.0 GPA (State/Comp. Universities) | 0.022*** | 0.013*** | 0.020*** | 0.008 |
| N = 50,665 | (0.004) | (0.004) | (0.006) | (0.006) |
| | [0.029] | [0.104] | [0.046] | [0.170] |

*Notes*: This table reports regression discontinuity estimates using Equation 1 using a 0.4 GPA-point bandwidth around each threshold. Each estimate comes from a separate regression. The outcome in columns 1 and 2 are transfers to the institution(s) that the minimum transfer GPA is relevant for. The outcome in columns 3 and 4 are transfers to *any* institution within USG. Heteroskedasticity robust standard errors clustered at students' GPA at 30 credits is reported in parentheses (* $p < .10$ ** $p < .05$ *** $p < .01$). Means of the outcomes just below the threshold are reported in brackets.

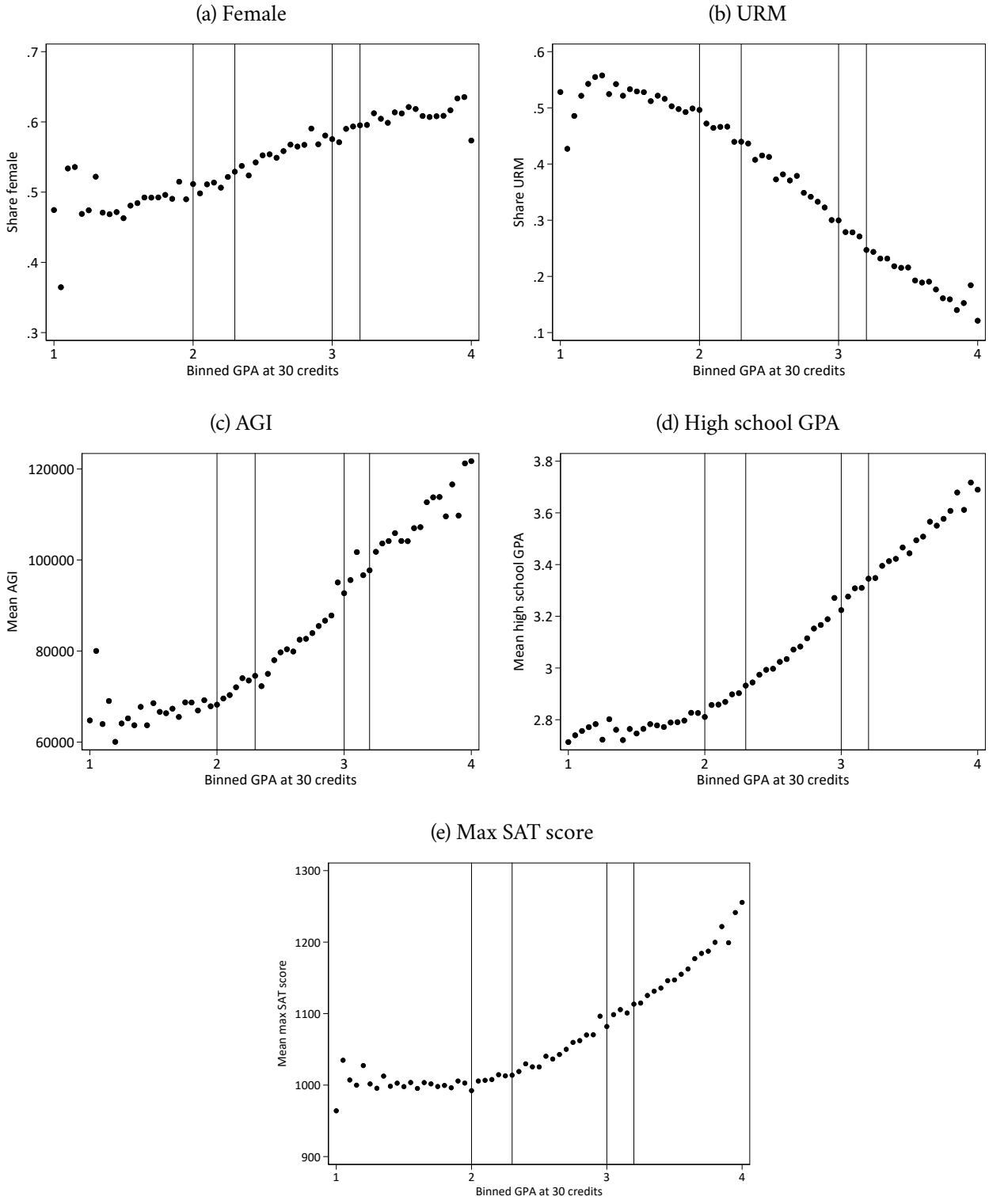
# Appendix A. Figures and Tables

Figure A1: Density of GPAs at 30 credits




*Notes*: This figure displays the density of GPAs (in bins of 0.05 GPA points). Panel (a) includes the full sample of students who have earned at least 30 credits. Panel (b) excludes students with GPAs exactly equal to a multiples of 0.25. Panels (c) through (e) compare GPA densities around the institution-specific transfer thresholds between the full sample and students already enrolled in the institution (at 30 credits) for which the transfer threshold is relevant for.

Figure A2: Covariate balance




*Notes*: This figure shows the relationships between covariates and GPAs at 30 credits in bins of 0.05 points. URM stands for under-represented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Max SAT scores are calculated using SAT or ACT scores, where ACT scores are converted into the SAT scale using official concordance tables. AGI stands for adjusted gross income and is obtained from students's filings of the Free Application for Federal Student Aid.

Table A1: Covariate balance

| | Female (1) | URM (2) | AGI ($1000s) (3) | HS GPA (4) | Max SAT score (5) |
|---|---|---|---|---|---|
| Above 3.2 GPA (UGA) | 0.006 | -0.008 | -0.485 | -0.001 | -0.134 |
| | (0.007) | (0.006) | (1.881) | (0.013) | (4.641) |
| Above 3.0 GPA (Georgia Tech) | 0.002 | 0.002 | -2.202 | -0.007 | -2.607 |
| | (0.007) | (0.007) | (1.805) | (0.013) | (4.329) |
| Above 2.3 GPA (Georgia State) | 0.005 | 0.005 | -1.817 | 0.007 | -1.764 |
| | (0.008) | (0.007) | (1.132) | (0.010) | (3.547) |
| Above 2.0 GPA (State/Comp. Universities) | 0.002 | 0.003 | -0.159 | -0.015 | -7.340 |
| | (0.012) | (0.008) | (1.477) | (0.016) | (6.684) |
| Bandwidth | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |

*Notes*: This table reports estimates of Equation 1 where covariates are used as the outcome. Each coefficient comes from a separate regression. Heteroskedasticity robust standard errors clustered at students' GPA at 30 credits is reported in parentheses (* $p < .10$ ** $p < .05$ *** $p < .01$).

Table A2: Fall 2018 admissions statistics

| | First-time Freshman Admissions | | | Transfer Admissions | | |
|---|---|---|---|---|---|---|
| Institution name | Applicants (1) | Admits (2) | Admit rate (3) | Applicants (4) | Admits (5) | Admit rate (6) |
| Georgia Institute of Technology | 35,612 | 8,037 | 23% | 2,068 | 606 | 29% |
| University of Georgia | 26,027 | 12,659 | 49% | 2,757 | 2,085 | 76% |
| Georgia State University | 19,838 | 12,393 | 62% | 4,687 | 2,947 | 63% |
| Kennesaw State University | 13,427 | 7,779 | 58% | 7,185 | 4,544 | 63% |
| Georgia Southern University | 11,522 | 7,797 | 68% | 2,324 | 1,797 | 77% |
| University of West Georgia | 8,154 | 4,745 | 58% | 1,670 | 1,169 | 70% |
| University of North Georgia | 6,498 | 4,792 | 74% | 1,496 | 1,011 | 68% |
| Valdosta State University | 6,557 | 4,105 | 63% | 1,311 | 1,050 | 80% |
| Columbus State University | 3,841 | 2,166 | 56% | 1,417 | 995 | 70% |
| Fort Valley State University | 3,684 | 1,950 | 53% | 335 | 243 | 73% |

*Notes*: The data in this table comes from Common Data Set reports obtained from each institution's website. Only USG institutions who report the Common Data Set on their website are included in the table.

Table A3: Robustness checks

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| *Panel A. Transfer within 1 year* | | | | | | | |
| Above 3.2 GPA | 0.021*** | 0.022*** | 0.023*** | 0.023*** | 0.017*** | 0.024*** | 0.026*** |
| (UGA) | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) | (0.002) | (0.002) |
| Above 3.0 GPA | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 | -0.000 |
| (Georgia Tech) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Above 2.3 GPA | 0.004*** | 0.005*** | 0.005*** | 0.005*** | 0.004** | 0.006*** | 0.007*** |
| (Georgia State) | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.001) | (0.001) |
| Above 2.0 GPA | 0.021*** | 0.021*** | 0.022*** | 0.022*** | 0.021*** | 0.025*** | 0.027*** |
| (State/Comp. Universities) | (0.005) | (0.005) | (0.005) | (0.005) | (0.006) | (0.004) | (0.004) |
| *Panel B. Ever transfer* | | | | | | | |
| Above 3.2 GPA | 0.015*** | 0.017*** | 0.017*** | 0.017*** | 0.010*** | 0.016*** | 0.020*** |
| (UGA) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.002) | (0.003) |
| Above 3.0 GPA | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 | -0.001 |
| (Georgia Tech) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Above 2.3 GPA | 0.003 | 0.004 | 0.005** | 0.005** | 0.002 | 0.007*** | 0.009*** |
| (Georgia State) | (0.003) | (0.003) | (0.003) | (0.003) | (0.004) | (0.003) | (0.003) |
| Above 2.0 GPA | 0.008 | 0.010** | 0.013*** | 0.013*** | 0.008 | 0.017*** | 0.019*** |
| (State/Comp. Universities) | (0.006) | (0.005) | (0.005) | (0.005) | (0.008) | (0.005) | (0.004) |
| Bandwidth | 0.3 | 0.35 | 0.4 | 0.4 | 0.4 | 0.45 | 0.5 |
| Demographic controls | | | | ✓ | | | |
| Quadratic | | | | | ✓ | | |

*Notes*: This table reports estimates from variants of Equation 1 where alternative specification choices and bandwidths are used. Panel A reports estimates for whether students transfer within 1 year after earning 30 credits to the institution(s) the GPA threshold is relevant for. Panel reports estimates for whether students ever transfer after earning 30 credits to the relevant institution(s). Heteroskedasticity robust standard errors clustered at students' GPA at 30 credits is reported in parentheses (* $p < .10$ ** $p < .05$ *** $p < .01$).

Table A4: Donut regression discontinuity estimates

| | Institution(s)-specific transfer | | Any transfer within USG | |
|---|---|---|---|---|
| | Within 1 year | Ever | Within 1 year | Ever |
| | (1) | (2) | (3) | (4) |
| Above 3.2 GPA (UGA) | 0.025*** | 0.018*** | 0.031*** | 0.011 |
| N = 94,529 | (0.002) | (0.003) | (0.005) | (0.007) |
| | [0.010] | [0.046] | [0.079] | [0.237] |
| Above 3.0 GPA (Georgia Tech) | 0.000 | -0.001 | 0.004 | 0.009 |
| N = 90,320 | (0.000) | (0.001) | (0.005) | (0.007) |
| | [0.002] | [0.008] | [0.075] | [0.214] |
| Above 2.3 GPA (Georgia State) | 0.005*** | 0.004* | 0.002 | 0.003 |
| N = 62,580 | (0.001) | (0.003) | (0.006) | (0.007) |
| | [0.007] | [0.028] | [0.087] | [0.215] |
| Above 2.0 GPA (State/Comp. Universities) | 0.017*** | 0.010* | 0.014*** | 0.007 |
| N = 46,542 | (0.004) | (0.006) | (0.005) | (0.007) |
| | [0.029] | [0.104] | [0.046] | [0.170] |

*Notes*: This table reports estimates from a specific variant of Equation 1 that uses a sample that excludes students with GPAs at 30 credits exactly equal to multiples of 0.25. Each coefficient is from a separate regression. The outcome in columns 1 and 2 are transfers to the institution(s) that the minimum transfer GPA is relevant for. The outcome in columns 3 and 4 are transfers to *any* institution within USG. Heteroskedasticity robust standard errors clustered at students' GPA at 30 credits is reported in parentheses (* $p < .10$ ** $p < .05$ *** $p < .01$). Means of the outcomes just below the threshold are reported in brackets.

Table A5: Estimates of the heterogeneity in short-term transfer impacts

| | By race/ethnicity | | By family income | | By institution type | | |
|---|---|---|---|---|---|---|---|
| | URM students (1) | Non-URM students (2) | Lower-income students (3) | Higher-income students (4) | Students at research univs. (5) | Students at state & comp. univs. (6) | Students at state & 2-year colleges (7) |
| Above 3.2 GPA | 0.010*** | 0.028*** | 0.014*** | 0.031*** | 0.009*** | 0.024*** | 0.031*** |
| (UGA) | (0.002) | (0.003) | (0.002) | (0.003) | (0.003) | (0.002) | (0.004) |
| | [0.015] | [0.041] | [0.004] | [0.013] | [0.009] | [0.010] | [0.011] |
| N | 30,569 | 75,622 | 48,081 | 49,533 | 20,002 | 52,719 | 33,470 |
| Above 2.3 GPA | 0.004 | 0.005*** | 0.004** | 0.006*** | -0.002 | 0.004* | 0.007*** |
| (Georgia State) | (0.002) | (0.002) | (0.002) | (0.002) | (0.001) | (0.002) | (0.003) |
| | [0.007] | [0.005] | [0.006] | [0.005] | [0.002] | [0.005] | [0.008] |
| N | 29,374 | 39,510 | 36,819 | 25,412 | 7,551 | 34,069 | 27,264 |
| Above 2.0 GPA | 0.025*** | 0.020*** | 0.023*** | 0.031*** | 0.004 | 0.023*** | 0.025*** |
| (State/Comp. Univs.) | (0.007) | (0.005) | (0.006) | (0.006) | (0.004) | (0.008) | (0.007) |
| | [0.030] | [0.027] | [0.027] | [0.027] | [0.006] | [0.017] | [0.005] |
| N | 24,058 | 26,597 | 28,549 | 17,195 | 7,104 | 23,661 | 19,890 |

*Notes*: This table reports estimates of transfer impacts within one year of earning 30 credits from Equation 1, run separately for several student subgroups. URM stands for underrepresented race/ethnic minority, which includes students who identify as Black, Hispanic, or Native American. Students are classified as lower or higher income based on whether their adjusted gross income was reported to be above or below $60,000. Heteroskedasticity robust standard errors clustered at students' GPA at 30 credits is reported in parentheses (* $p < .10$ ** $p < .05$ *** $p < .01$). Means of the outcomes just below the threshold are reported in brackets.