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## High School Transfer Students and the Transition to College: Timing and the Structure of the School Year

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### Abstract

The timing of a high school transfer may shape students' transitions to college through its (mis)alignment with the structure of the school year. A transfer that occurs during the summer interrupts the four-year high school career, whereas a transfer that occurs midyear disrupts both the four-year high school career and the structure of the school year. Using the Education Longitudinal Study of 2002 (ELS), the investigators find that the penalty suffered after the transfer depends on the degree to which students' high school pathways synchronize with the curricular and extracurricular structure of the school year. Midyear transfer students appear to suffer the greatest postsecondary matriculation penalty. Students who transfer midyear are less likely to attend a four-year college compared with nontransfer and summer transfer students, whereas summer transfer students are less likely to attend a highly selective four-year college compared with their nontransfer counterparts. Curricular and extracurricular disruptions that transfer students experience after their school move explain some, but not all, of the negative associations observed between transferring and the transition to college. Directions for future research and the theoretical and policy implications of the results are discussed.

### Keywords

transfer; student mobility; transitions; postsecondary enrollment

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High school students' opportunities are shaped by their academic and social status positions in the years leading up to graduation. Because schooling advantages and disadvantages accumulate over time (Kerckhoff 1993), the opportunities a student has for academic upward mobility narrow over the high school career (Schneider, Swanson, and Riegle-Crumb 1997). By the junior and senior years, students' academic positions are generally formed and relatively rigid. Moreover, the final two years of high school constitute a critical time period during which students construct their college portfolios. They enroll in courses, earn grades, and participate in extracurricular activities that influence the type and selectivity of the postsecondary institution they attend (Adelman 2006; Espenshade, Hale, and Chung 2005; Karen 2002; Owings et al. 1995). Of course, students' performance during the last few years of high school is largely a continuation of their performance at the beginning of high school; however, a risky event—like a high school transfer—may disrupt this continuity. Whether students are on a pathway to a community college or a top-tier university, moving to a new school during the last two years of high school may derail

students from their educational trajectories at a time that offers little opportunity for recovery.

Indeed, research suggests that students who transfer late in high school face harsher academic consequences than students who transfer early in high school (Swanson and Schneider 1999). However, the four years of high school constitute just one way that the institution of the school is structured and cumulative by nature. Schools are also heavily structured *within* each year by the academic calendar. Thus, whether a school move aligns with the structure of the school year may alter students' educational trajectories through disrupting schooling processes that are organized around the academic calendar. For example, the academic skills formed early in a school year provide the foundation for new skills and experiences formed later that year. Teachers' daily lesson plans, examinations, and even extracurricular activity "seasons" are organized around the calendar year and structured under the assumption that students begin school at the start of the academic year and continue through until school is dismissed for summer. This is not the case, however, for students who transfer to a new school during the middle of the year. Although students who transfer during the summer interrupt the continuity of the four-year high school career, students who transfer during the middle of the year disrupt the continuity of both the four-year high school career and the calendar year. This study investigates how a transfer during the last two years of high school and its alignment with the curricular and extracurricular structure of the school year influence students' next major transition—the transition to college.

The literature on transfer students is surprisingly underdeveloped given the interesting theoretical implications of unscheduled high school transitions, or transitions that are not simply standard school promotions (e.g., the middle to high school transition). This is particularly the case given that about 10 percent of 12th graders have transferred to a new school at least once since 10th grade (Rumberger 2003). In general, the research on student mobility suggests that transferring schools negatively affects students' educational outcomes. Because transfer students have accumulated more risk factors prior to transferring than have their nontransfer peers (Pribesh and Downey 1999; Rumberger and Larson 1998), a high school transfer may represent an additional liability along a pathway already marked by academic vulnerability and a history of family and school transitions (Teachman, Paasch, and Carver 1996). Just as these risks predict further deleterious events like a high school transfer, an unscheduled transition may narrow an already limited educational trajectory by influencing the transition to college—either through affecting whether one goes to college or through influencing the type and selectivity of the institution one attends. We use the Education Longitudinal Study (ELS:2002), a nationally representative study of 10th graders, in order to understand how the impact of a high school transfer on the transition to college depends on its alignment with the structure of the school year.

## BACKGROUND

### High School Transfer and the Transition to College

Understanding how transfer students who graduate from high school compare with their nontransfer counterparts with respect to college-going lends insight into what role, if any, an unscheduled high school transition plays in shaping students' transitions to college. Postsecondary attendance improves an individual's well-being, through better economic (Card 1999; Jaeger and Page 1996), civic engagement (Kingston et al. 2003), and health (Link and Phelan 1995) outcomes, for example. Attending college and obtaining a degree is more economically consequential than ever before (Day, Newburger, and U.S. Census Bureau 2002), yet research suggests that the odds of persistence and the benefits of a postsecondary degree vary by the type and selectivity of the college that students attend. For

example, although there are economic benefits to earning a two-year degree (Kane and Rouse 1999; Marcotte et al 2005), people who earn a bachelor's degree earn a higher salary (Day et al. 2002) and attain a higher occupational status (Monk-Turner 1990) than people who earn a two-year degree. Additionally, research suggests that attending a more selective or elite college results in higher wages (Dale and Krueger 2002), occupational status, educational achievement (Brand and Halaby 2006), and persistence rates (Long 2008) than attending a less selective college. Ultimately, investigating the impact of transferring during the last few years of high school on the type and selectivity of institution attended will provide insight into the uncharted territory of how one transition affects another during this critical period in the transition to adulthood.

### **Educational Consequences of High School Transfers**

Although no study has examined how high school transfers influence postsecondary outcomes, a body of research has explored the high school educational consequences of a school move. A few studies suggest that a high school transfer may result in educational opportunity (Hanushek, Kain, and Rivkin 2004; Lee and Burkam 1992) or even higher test scores for students who transfer in early high school (Swanson and Schneider 1999). However, most research suggests that an unscheduled high school transition produces negative educational outcomes. For example, several studies find that transferring to a new high school is positively associated with dropping out of school (Rumberger and Larson 1998; South, Haynie, and Bose 2007; Swanson and Schneider 1999) and negatively related to test scores (Pribesh and Downey 1999; Swanson and Schneider 1999). In fact, Astone and McLanahan (1994) argue that changing high schools after a family move explains part of the negative association between family structure and high school dropout. Additionally, Schneider and colleagues (1997:46) find that students who hold a "positional advantage developed through course sequences" in math are especially at risk of being derailed from the advanced math track after transferring. This finding suggests that even on-track and advanced students may suffer academically from a high school transfer.

### **Who Transfers?**

Which students are most at risk of experiencing a high school transfer? Research suggests that students who are disadvantaged with respect to family and academic background are more likely to transfer than more advantaged peers. For example, students from disrupted family structures experience more school moves, on average, than students living with both biological parents (Astone and McLanahan 1994; Rumberger and Larson 1998). Research also suggests an association between low socioeconomic status and high student mobility (Hanushek et al. 2004; Mehana and Reynolds 2004; Pribesh and Downey 1999). Transfer students have higher levels of behavioral problems (Bowditch 1993; Lee and Burkam 1992; Rumberger and Larson 1998), lower academic achievement (Rumberger et al. 1998), and lower educational expectations (Langenkamp 2006) than nontransfer students before they transfer. Finally, research suggests that students attending Catholic schools (Lee and Burkam 1992; Rumberger and Larson 1998) and urban schools (Rumberger and Palardy 2005; Swanson and Schneider 1999) are more likely to transfer.

Langenkamp (2006), using the National Longitudinal Study of Adolescent Health (Add Health), and Rumberger and Larson (1998), using the National Education Longitudinal Study (NELS:88), confirm many of these antecedents of transferring by using regression modeling and propensity score matching methods to predict who transfers. Transfer students, however, are not a homogenous group, and important differences are also likely to exist among this group of students before they transfer. It seems probable that the circumstances surrounding a transfer that occurs during the middle of the academic year might be riskier than those in which the transfer student remains in the sending school

throughout the entire school year. For example, a midyear transfer student may be forced to move to a new school during the middle of the school year due to severe academic or behavioral problems. Thus, when trying to assess the independent effect of the timing of an unscheduled high school transition on the transition to college, it is important to account for the different trajectories prior to the transition both among transfer students and between transfer and nontransfer students.

### **Alignment of the Transition with the Structure of the School Year**

High school students' academic and social trajectories are shaped by their curricular and extracurricular experiences. For example, students enroll in courses where they earn grades and complete coursework necessary for high school graduation and college admission, but they also make friends with students who share the same courses (Kubitschek and Hallinan 1998)—friends who together select the courses they take the next year (Frank et al. 2008). Moreover, extracurricular participation plays an important role in college and selective college admissions decisions (Stevens 2009) and, at the same time, is a source of social integration and exposure to college-oriented friends and faculty mentors (Eccles et al. 2003). In sum, a student's curriculum and extracurriculum may shape her transition to college through both academic and social processes.

Whereas a student's curricular and extracurricular experiences organize her academic and social lives, a school's curriculum and extracurriculum are organized around the academic calendar and based on the assumption that students are continuously enrolled during the four years of high school. Course scheduling, daily homework assignments, final examinations, extracurricular tryouts, and leadership elections are all rigidly scheduled around the school year. Furthermore, the accumulation of knowledge needed to progress through coursework and the maintenance of peer and teacher relationships largely depend upon the continuity of students' curricular and extracurricular experiences throughout the high school career and academic school year. A high school transfer, however, may disrupt the continuity of students' curricular and extracurricular experiences over the high school career, the academic calendar year, or both. Thus, the level of disruption a student experiences may depend on whether the student's high school transfer aligns with the academic calendar and thereby the curricular and extracurricular structure of the school year. In this way, the timing of an unscheduled transition—whether it occurs during the summer or during the middle of the academic school year—may affect students' transitions to college.

Indeed, Elder's (1994, 1998) notion of "timing in lives" suggests an explicit relationship between the timing of a transition and its influence on later transitions. Specifically, Elder (1998:3) argues that "the timing of life transitions has long-term consequences through effects on subsequent transitions." We suspect that transferring to a new school will negatively affect summer transfer students' transitions to college compared with nontransfer students because it disrupts the accumulative nature of the high school career. However, we argue that a midyear transfer may result in the most severe penalty with respect to the transition to college. A transfer that occurs during the middle of the year misaligns with the curricular and extracurricular structure of the school year, thereby threatening the continuity of students' curricular and extracurricular experiences that are accumulated throughout both the high school career and the academic school year.

How might a high school transfer and its alignment with the structure of the school year affect the type or selectivity of the college the student attends? A high school transfer, regardless of its timing, could affect the type and selectivity of college students attend through curricular disruptions. For example, an unscheduled school change could disrupt students' coursework at the new school or result in academic challenges due to curriculum variance or instructional disruption (Mehana and Reynolds 2004). Moreover, destination

schools may not accept all course credits from transfer students' former schools. Some of these curricular disruptions might be more severe for those students whose transfers do not align with the academic school year, however. For example, leaving school during the middle of the year may interrupt students' coursework at the sending school and result in low grades or even incomplete courses that could delay high school graduation for some students. Because course assignments are generally made before the school year begins, midyear transfer students may face curricular disruptions by enrolling in their new schools after these assignments have been made. Summer transfer students may be less likely to experience these particular challenges; their transfers align with the academic calendars of both their former and new schools and enable them to finish the school year before they transfer. At the same time, even a slight derailment in a student's educational trajectory could shape summer transfer students' transitions to college through affecting the selectivity of college they attend.

Although all transfer students may experience some level of curricular disruption, students who enter their new school during the middle of the year must also successfully adjust to a new curricular environment at the classroom level. For example, students who transfer during the middle of the year must "become part of a class that has already built ... a shared knowledge base acquired from previous instruction and required for subsequent learning" (Lash and Kirkpatrick 1990:179). Indeed, each formula learned in calculus class, every discussion of a chapter in a novel, and all the lessons in a foreign language course build upon the previous periods, discussions, and lessons. A student's success at the end of the unit, midterm, and semester is highly dependent on how successful she was in acquiring the necessary knowledge and building blocks that must be accumulated over the semester and year. Midyear transfer students may have trouble acquiring the necessary foundation for academic success within a class, placing them at risk of earning low grades or even repeating the course.

In addition to affecting the continuity of students' curricular experiences, the timing of a high school transfer may affect students' participation in sports and other school-sponsored activities that are rigidly organized around the calendar year. For example, participating in school-sponsored extracurricular activities—venues for developing peer and faculty relationships and predictors of postsecondary matriculation (Eccles et al. 2003)—may prove challenging for students who transfer during the middle of the year. Even midyear transfer students who were actively involved in school activities at their former schools may lose the opportunity to participate in the same activities at their new school if they transfer during the middle of the activity's "season." Summer transfer students may also miss a particular window of opportunity to participate in an extracurricular activity if they miss summer tryouts, for example. Moreover, both midyear and summer transfer students who become involved in an extracurricular activity at their new school may be less likely to serve in leadership positions, which may serve as important college application builders. Because leadership positions are generally awarded to more senior students who have exhibited strong leadership qualities throughout high school, a student who moves to a new school during the last few years of high school may miss the opportunity to hold these positions at both the sending school and the new high school.

In sum, we suspect that unscheduled high school transitions will negatively shape students' transitions to college compared with nontransfer students because a high school transfer that occurs during the last half of high school interrupts the continuity of the curricular and extracurricular processes fostered over the high school career and leaves little time for students to recover. However, the extent of the penalties that transfer students experience with respect to the transition to college may depend on whether the transfer aligns with the curricular and extracurricular structure of the school year. Thus, we place midyear transfer

students at the upper end of a disruption continuum and suspect that this group of students will experience the greatest penalties with respect to the transition to college, with summer transfer students falling somewhere in between nontransfer and midyear transfer students.

### Research Questions

To understand how a high school transfer's alignment with the structure of the school year shapes students' transitions to college, we address two main questions. First, after we take into account preexisting differences among midyear, summer, and nontransfer students, does the alignment or misalignment of a transfer with the structure of the school year affect the type and selectivity of the college that transfer students attend compared with nontransfer students? Second, do curricular and extracurricular disruptions after a high school transfer explain the negative impact of a midyear or summer transfer on the type and selectivity of college enrollment compared with nontransfer students?

## DATA AND METHOD

We use data from the Education Longitudinal Study (ELS:2002), a study that surveyed a nationally representative group of students during their sophomore year of high school (approximately 16,000 students) and collected two waves of follow-up data (in 2004 and 2006). The survey provides multiple sources of information on students by collecting information from parents and high school personnel. Additionally, the survey offers researchers rich academic data on the students by providing high school transcripts and standardized test scores. Since the survey was largely designed to track a cohort of sophomores as they take different pathways into adulthood, the data are well suited for our goals. Because ELS offers high school transcript information, we are able to determine the dates that transfer students left their base year schools. Given the rich measures that ELS offers for tenth graders, we are also able to control on a host of characteristics that might predict both transferring and postsecondary matriculation. Moreover, although posttransfer high school measures are limited for transfer students, ELS allows us to explore some potential curricular and extracurricular sources of transfer students' postsecondary matriculation penalties.

Of the base year cohort of a little over 16,000 sophomores, we retained students who responded to base year, first follow-up, and second-follow up surveys ( $n = 12,590$ ).<sup>1</sup> To have received the transfer questionnaire, students must have been enrolled at the new school at the time of the first follow-up. Thus, for comparison purposes, we include only students who remained in their base year school or transferred to a new school at the time of the first follow-up and exclude students who graduated early, dropped out of school, or were homeschooled ( $n = 11,580$ ). We also exclude transfer students for whom we cannot determine when the student left the sending school based on transcripts indicating the semester the courses were taken at each school (150 transfer students of 1,030 = 15 percent of transfer sample after above filters). Finally, since postsecondary enrollment is our dependent variable, we restrict our analytic sample to those students who either graduated from high school or obtained a GED at some point before the second follow-up surveys were generated and about whom we have postsecondary information ( $n = 11,100$ ).<sup>2</sup> Among students who were enrolled in school at the time of the first follow-up, about 19 percent, 7 percent, and 2 percent of midyear, summer, and nontransfer students, respectively, had not

<sup>1</sup>All sample sizes are rounded to the nearest 10 in accordance with NCES guidelines.

<sup>2</sup>We estimated our models with students who dropped out of school and obtained results similar to those estimated without these students. Although we excluded students who dropped out of school entirely, we opted to keep 90 students who experienced a dropout spell between 10th and 12th grade and returned to school before the first follow-up for the purposes of statistical power. We obtained similar results with and without these students in our analytic sample.

graduated from high school at the time of the second follow-up survey. Our final analytic sample includes 770 transfer students (530 summer transfers and 240 midyear transfers) and 10,330 nontransfer students (total  $N = 11,100$ ).

We use multiple imputation to handle missing data on the independent variables and average our multinomial logistic and logistic regression estimates across each of the imputed data sets using Excel (Rubin 2004). We also use the survey command (“svy”) in Stata to incorporate our sample weights and better account for clustering within schools.

### Dependent variables

Our first dependent variable is a trichotomous measure indicating whether a student had attended a postsecondary institution at the time of the second follow-up and, if so, the type of postsecondary institution the student attended. We collapse “at least two years but less than four years” and “less than two years,” and refer to persons in this category as “two-year college-goers” due to the small percentage (less than 2 percent) of our analytic sample whose first attended college offered less than two years of education.<sup>3</sup>

Our second dependent variable indicates the institutional selectivity of the first postsecondary institution the student attended. ELS produces this measure by linking the institutions with IPEDS data and classifying the selectivity according to the 2005 Carnegie classifications, in which selectivity is based on the SAT and/or ACT scores of matriculating freshman. The measure of selectivity is restricted to four-year colleges and is a dichotomous measure indicating that the college was “highly selective” or that the average SAT/ACT score of entering freshman was in the top 25th percentile. Four-year colleges that are ranked lower than “highly selective” serve as the omitted category.

### Timing of transfer

We construct three dummy variables to indicate whether a student transferred between 10th and 12th grades and, if so, when during the academic calendar year the student left the sending school. We categorized students who left their school during May, June, July, and August as transferring during the summer and those who left between or during the months of September and April as transferring during the middle of the school year. Nontransfer students serve as the contrast category. We recognize that there is regional variation in whether the school year ends in May or June. We observe a spike in the number of students who transfer during the month of May and decided to include this month as “summer” to include those schools in regions where school ends in May. We argue that even if a school ends in June and a student transfers in May, it is likely that a student’s courses would still transfer to the new school. Moreover, the student would be able to begin class on the first day of the new school.

### Instability measures

Since research finds that residential mobility is negatively related to academic outcomes such as high school graduation (Astone and McLanahan 1994; Rumberger and Larson 1998; Swanson and Schneider 1999) and positively associated with transferring schools (Rumberger and Larson 1998), it is important to control for whether a student changed residences between 10th and 12th grade. ELS did not directly ask students whether they moved since the baseline interview, so we constructed a dichotomous variable based on zip code change between base year and first follow-up.

<sup>3</sup>As a sensitivity check, we combined this small population of students with students who had never attended a postsecondary institution and obtained very similar results across all multinomial logistic models.

### Individual traits and family background

We also control for sociodemographic characteristics that are associated with both transferring and college-going, including race/ethnicity, whether the student is a native English speaker, family structure, parents' highest level of education, and annual family income.

### Academic measures and educational expectations

We use 10th grade academic grade point average (GPA) from the ELS transcript data and also control for math and reading Item Response Theory (IRT) standardized test scores administered by ELS to students in the base year. For educational expectations, we include an ordinal variable constructed by the National Center for Education Statistics (NCES) (1 = less than high school; 2 = high school graduate or GED; 3 = attend or complete a two-year degree; 4 = attend a four-year college; 5 = graduate from four-year college; 6 = obtain a master's degree; 7 = obtain a PhD, MD, or other advanced degree). We also control for math course-taking by including an ordinal variable indicating 10th grade math course level enrollment (0 = no math; 1 = basic/remedial math; 2 = general/applied math; 3 = prealgebra; 4 = algebra 1; 5 = geometry; 6 = algebra 2; 7 = advanced math/precalculus; 8 = calculus).<sup>4</sup> This variable was constructed from the Classification of Secondary School Courses code (CSSC) assigned to each class on a student's transcript (see Riegle-Crumb and Grodsky 2010 for more detailed information).

### School involvement and behavioral problems

We consider potential differences between transfer and nontransfer students in prior extracurricular involvement by controlling for 10th grade extracurricular involvement, including interscholastic sport participation and leadership, academic club involvement, and various other school-sponsored club involvement.<sup>5</sup> We also include an index measure that taps students' school discipline-related problems.<sup>6</sup>

### School variables

We control for school urbanicity, region, and school sector. We also include a continuous variable that indicates the percentage minority at the school. To capture school-level disadvantage, we construct a variable that measures the average education level of students' parents at the school. These variables are all measured in students' 10th grade base year school.

### Posttransfer measures of curricular and extracurricular disruptions

In our final models, we examine potential mechanisms by exploring the role that curricular and extracurricular disruptions play in the associations we observe between the timing of a high school transfer and the transition to college. We control for 12th grade academic GPA, 12th grade interscholastic sports participation and leadership, and 12th grade academic and other school-sponsored extracurricular involvement. In an attempt to assess coursework disruptions, we compare students' senior year math course-taking to their 10th grade math course (pretransfer), which taps math course trajectories. Specifically, we control for whether a 12th grade student advanced in math beyond her 10th grade level. Finally, we

<sup>4</sup>We also estimated our analyses with dichotomous indicators of math course level and obtained similar results.

<sup>5</sup>Nonacademic clubs include school band or chorus, school play or musical, student government, school yearbook or newspaper, school service clubs, and school vocational clubs.

<sup>6</sup>The index variable was constructed by calculating the mean of responses to a series of questions. Students were asked, "How many times did the following things happen to you in the first semester or term of this school year?" The items include "late for school," "cut/skip school," "absent from school," "got in trouble," "put on in-school suspension," "suspended/put on probation," and "transferred for disciplinary reason." Each of the responses was reverse coded and recoded to a range of 0–4 ( $\alpha = .72$ ).



control for whether students graduated with an “on-time,” standard high school diploma (vs. delayed graduation or GED). We define “on-time” as students who graduated within two years of their sophomore years of high school.<sup>7</sup>

### Analytic Plan

After describing preexisting differences between midyear transfer, summer transfer, and nontransfer students (shown in Table 1), we address our first research question by using a multinomial logistic regression to predict no college enrollment, two-year college enrollment, and four-year college enrollment (shown in Table 2). We attempt to isolate the impact of the timing of an unscheduled transition on the transition to college by first controlling for variables that distinguish nontransfer students, summer transfer students, and midyear transfer students. After accounting for these preexisting differences, we investigate potential mechanisms by exploring whether curricular and extracurricular disruptions measured after students transfer to their new schools help explain any of the negative relationships we observe between a midyear or summer transfer and type of college matriculation.

Last, we use logistic regression to predict the odds of attending a highly selective college (vs. any other four-year college) among four-year college matriculates in order to investigate penalties that might surface at the institutional selectivity level. We restrict our sample for this analysis to nontransfer students and summer transfer students who attend a four-year college. This is done for two reasons. First, we lack statistical power for an analysis of midyear transfers with respect to institutional selectivity since fewer than 10 students who transferred midyear attended a highly selective university. Second, although our multinomial logistic regression results indicate that midyear transfer students are less likely to attend a four-year college than nontransfer students, we find that summer transfer students are no less likely to attend a four-year college compared with nontransfer students.

We present average marginal effects from our multinomial logistic and logistic regressions. In contrast to odds ratios and relative risk ratios, average marginal effects allow for a comparison of coefficients across models with different covariates because they are unsusceptible to changes in unobserved heterogeneity across models (see Mood 2010 for more information).<sup>8</sup> Average marginal effects are interpreted as the predicted change in the probability of the outcome given a one-unit change of a covariate, averaged across all observations.<sup>9</sup>

## RESULTS

Table 1 shows how midyear transfer and summer transfer students differed from each other and from nontransfer students before they transferred. Prior to the high school move, transfer students were at an overall disadvantage compared with their nontransfer peers in terms of previous school transfers, family structure, academic portfolio, and extracurricular participation, among many other factors that are related to postsecondary enrollment. For example, nontransfer students' average 10th grade GPA was 2.71, compared with 2.25 and 1.90 for summer transfer and midyear transfer students, respectively. Consistent with previous literature (Rumberger and Larson 1998), about half of transfer students

<sup>7</sup>This measure is not used in our highly selective college matriculation models because fewer than 20 students who attended a four-year college did not graduate with an on-time high school diploma.

<sup>8</sup>Results using odds ratios and relative risk ratios produce identical substantive interpretations.

<sup>9</sup>Given that probabilities must sum to one, average marginal effects sum to zero (except for rounding error) across all outcomes. Because probabilities are not inherently relative like odds and relative risks, there is no omitted category when estimating average marginal effects.

experienced a concurrent residential move compared with only 10 percent of nontransfer students. Although both summer transfer students and midyear transfer students are worse off with respect to sociodemographic and academic and extracurricular background factors, summer transfer students appear more advantaged than midyear transfers on a host of factors that are related to college-going, such as parental education level, family structure, 10th grade GPA, native English speaking status, most academic background variables, discipline problems, and academic extracurricular involvement.

Overall, the descriptive statistics suggest that midyear transfer, summer transfer, and nontransfer students are on different academic trajectories prior to transferring. In 10th grade, nontransfer students appear to be on the highest academic trajectory, followed by summer transfer students. Midyear transfer students are on the riskiest trajectories before they transfer to a new school, with summer transfer students falling somewhere in between midyear transfer and nontransfer students. Our descriptive statistics suggest a similar pattern with respect to students' posttransfer curricular and extracurricular measures, including GPA, math course-taking, on-time high school graduation rates, and extracurricular involvement. Furthermore, our descriptive statistics show that midyear transfer students have the lowest rates of four-year college matriculation, nontransfer students have the highest rates of four-year college matriculation, and summer transfer students fall somewhere in between. We are left wondering, however, whether an association between the (mis)alignment of a high school transfer with the curricular and extracurricular structure of the school year and students' next major transitions exists even after controlling for the social and academic background differences between midyear, summer, and nontransfer students.

### Timing of Transfer and Type of College Attendance

Table 2 shows results from multinomial logistic regression models predicting the association between transferring during the summer (vs. not transferring) and transferring midyear (vs. not transferring) and attending no college, a two-year college, and a four-year college. Selected coefficients in the form of average marginal effects are presented in Table 2 (full models shown in Tables A1, A2, and A3 of the online appendix). Model 1 estimates the baseline association between the timing of a high school transfer and not attending college. On average, the probability that a midyear transfer does not attend college is 24 percentage points higher than that of a nontransfer student ( $p < .001$ ). Summer transfer students have about an 8 percentage point higher probability of not going to college compared with nontransfer students ( $p < .001$ ).

In Model 2, we control for previous transfers, residential move, sociodemographic indicators, and school measures. Although these factors attenuate the magnitude of the association between transferring and not going to college, we still observe a positive and statistically significant association between transferring and attending no college for both midyear and summer transfer students compared with nontransfer students. Model 3 presents the results after we control for previous academic background and extracurricular involvement measures. Although controlling for these factors does not explain away the positive association between transferring midyear and not going to college, accounting for midyear transfer students' poorer academic backgrounds and lower levels of extracurricular involvement reduces the coefficient by about half. Controlling for these same factors renders the observed positive association between transferring during the summer and attending no college nonsignificant, and the coefficient is reduced to zero.

Although summer transfer students' postsecondary matriculation disadvantage was explained by factors prior to their transfer, our results suggest that there may be something about transferring during the middle of the year itself that negatively shapes students'

transitions to college. Specifically, after we control for preexisting family, academic, and social factors, midyear transfer students have about an 8 percentage point higher probability of not attending college compared with their nontransfer counterparts. Why might midyear transfers be more likely to attend no college? We investigate this question by including curricular and extracurricular measures in 12th grade—when midyear transfer students were at their new schools. After we control for 12th grade math course level, 12th grade academic GPA, extracurricular involvement, and whether the student graduated on time with a standard high school diploma, the coefficient for midyear transfer students is reduced by approximately 30 percent (about 2.2 percentage points). The inclusion of these posttransfer curricular and extracurricular measures also significantly improves model fit. Although curricular and extracurricular disruptions appear to attenuate the association we observed between transferring midyear and going to college, these factors do not explain away the relationship. Even after we control for curricular and extracurricular disruptions, the probability of not going to college is about 6 percentage points higher for midyear transfer students compared with nontransfer students ( $p = .05$ ).

Turning to two-year college going, the next set of models examines the baseline association between the timing of a transfer and attending a two-year college. Model 1 shows that, on average, both types of transfer students have a higher probability of attending a two-year college compared with their nontransfer counterparts—about a 13 percentage point higher probability for midyear transfers and about a 7 percentage point higher probability for summer transfer students. After controlling for mobility and family background factors in Model 2, we still observe a significant and positive association between both types of transfers and attending a two-year college. In Model 3, we introduce students' 10th grade academic, extracurricular, and behavioral problems background. Controlling for these factors explains the positive association between transferring during the summer or during the middle of the year and attending a two-year college compared with not transferring at all.

We now turn to estimating the relationship between the timing of a high school transfer and four-year college matriculation, shown in the last four columns of Table 2. Model 1 shows the baseline association between transferring during the middle of the year or during the summer and attending a four-year college. On average, midyear transfer students have a 37 percentage point lower probability of attending a four-year college compared with nontransfer students. The probability of a summer transfer student attending a four-year college is about 15 percentage points lower than nontransfer students, on average. Model 2 introduces mobility, family, and school background factors. Although the observed negative associations between transferring midyear and attending a four-year college and transferring during the summer and attending a four-year college are reduced in magnitude, a negative and significant relationship between both types of transferring and four-year college-going persists. In Model 3, we introduce pretransfer academic and extracurricular background. Controlling for these factors renders the apparent negative association between transferring during the summer and attending a four-year college nonsignificant. Although the negative coefficient for midyear transfer students is substantially reduced in magnitude, a statistically significant and negative association remains. Midyear transfer students have an 11 percentage point lower probability of attending a four-year college compared with nontransfer students, on average and net of our controls.

Do curricular and extracurricular disruptions contribute to midyear transfer students' lower rates of four-year college matriculation? Accounting for posttransfer curricular and extracurricular disruptions reduces the negative association we observe between transferring during the middle of the year and attending a four-year college by about 17 percent. However, even after we control for these factors, midyear transfer students have about a 9

percentage point lower probability of attending a four-year college than nontransfer students, on average.

In ancillary analyses, we change our contrast category from nontransfer to summer transfer students to directly compare midyear and summer transfer students. We find that midyear transfer students are statistically significantly more likely to attend no college compared with summer transfer students and are significantly less likely to attend a four-year college compared with summer transfers, net of controls (results available upon request). Controlling for posttransfer curricular and extracurricular disruptions explains some but not all of summer transfer students' advantage over midyear transfer students with respect to postsecondary matriculation.

Taken together, our results suggest that family, academic, and extracurricular involvement factors before the transfer play a strong role in creating the apparent associations between transferring during the summer and each of our college-going outcomes. Even after we control for midyear transfer students' more disadvantaged backgrounds, however, these students remain at a serious disadvantage with respect to their transitions to college. Our results suggest that curricular and extracurricular disruptions that midyear transfer students experience at their new schools explain some, but not all, of the penalties they experience with respect to postsecondary matriculation.

### Matriculation into Selective Colleges

We did not find a college-going disadvantage for summer transfer students, suggesting that, holding all else constant, a summer transfer is less harmful than a midyear transfer with respect to postsecondary matriculation. At the same time, a disruption during the last two years of high school has the potential to derail students from both their academic and social trajectories at a point when their portfolios matter most, and given a competitive admissions process, even a slight derailment could shift the trajectory of a student positioned to enroll in a highly selective university. We explore this possibility by examining whether summer transfer students are less likely to attend a highly selective four-year college compared with their nontransfer peers.

Table 3 shows selected average marginal effects predicting the probability of attending a highly selective four-year college (full model shown in Table A4 of the online appendix). We restrict this analysis to those summer transfer and nontransfer students whose first attended college was a four-year university. Model 1 shows the estimated average marginal effects for the baseline association between transferring during the summer and selectivity of four-year institution attended. Summer transfer students have about a 15 percentage point lower probability of attending a selective university compared with nontransfer students ( $p < .001$ ), on average. In Model 2, we control for residential mobility and background factors. These factors appear to explain very little of summer transfer students' lower odds of attending a highly selective university compared with nontransfer students (AME =  $-.14$ ). After we control for pretransfer academic background, extracurricular involvement, and discipline problems in Model 3, the negative association between transferring during the summer and attending a selective university is attenuated but remains negative and significant. On average and net of preexisting mobility, family, school, academic, and extracurricular background, summer transfer students have about an 8 percentage point lower probability of attending a highly selective university compared with nontransfer students ( $p < .05$ ).

To explore the role that curricular and extracurricular disruptions may play in summer transfer students' lower odds of attending a selective university, we introduce posttransfer curricular and extracurricular measures. Accounting for these factors renders the negative

association between transferring during the summer and highly selective college matriculation nonsignificant and reduces the magnitude of the coefficient by about 30 percent.

## DISCUSSION

Taken together, our findings suggest that the timing of an unscheduled high school transition may have enduring effects through its impact on the transition to college. We find that students who transfer in the middle of the year are more likely to attend no college and less likely to attend a four-year college when compared with similar others who do not transfer or who transfer during the summer. We also find evidence that summer transfer students are disadvantaged when it comes to attending a highly selective college compared with students who do not transfer during the last two years of high school. Our results suggest that the negative associations between transferring midyear and college matriculation and transferring during the summer and highly selective college matriculation are partly a function of the curricular and extracurricular disruptions transfer students experience at their new schools. Ultimately, our findings suggest that high school transfers must be understood in the context of whether adolescents' lives are aligned (or misaligned) with the structure of the high school career and school year and, consequently, with the curricular and extracurricular organization of schools.

We find that students who transferred during the last two years of high school faced challenges—academic, social, and family background—prior to the transfer. Yet, our results also suggest that independent of these prior factors, a transfer during the last two years of high school resulted in an additional setback for these youths, and for midyear transfer students in particular. We conducted additional analyses to further investigate the possibility of a spurious association between the timing of a transfer and the transition to college. First, we used propensity score methods to better address this possibility. These results were consistent with those presented above, although our finding that summer transfer students are less likely to attend a highly selective university compared with nontransfer students was less robust than our findings related to midyear transfer students and type of college matriculation. We suspect that our results would be more robust with a larger sample of summer transfer students and a more stringent measure of college selectivity, such as elite college attendance. More details about the propensity score analyses and sensitivity analyses are available from the authors.

We also checked for other factors that might be responsible for the apparent association between the timing of a transfer and college matriculation. For example, students transfer for various reasons, and the reason for a transfer might be related to the timing of a transfer. In other words, the reason for a midyear transfer, such as being expelled from school, may be driving the apparent association between the timing of a transfer and type of college matriculation. We first attempted to assess this possibility by including students' self-reported reason(s) for transfer in our propensity score analysis that compared the college-going outcomes of midyear transfer students and summer transfer students. Our propensity score matching results are consistent with our multinomial logistic regression results. We further investigated this issue by estimating interactions between the timing of a transfer and the self-reported reason for a transfer (educational opportunity, family moved, discipline/personal, and miscellaneous). The pattern of our findings with respect to the postsecondary outcomes of midyear transfer, summer transfer, and nontransfer students holds, regardless of the reason for the transfer. In other words, midyear transfer students appear to suffer the greatest penalty with respect to postsecondary matriculation, regardless of the self-reported reasons for transferring.

Overall, our results suggest a story of cumulative disadvantage for midyear transfer students. Midyear transfer students had the least family and academic resources prior to their transfer and, net of these factors, experienced the greatest penalty with respect to the transition to college. Thus, a midyear transfer appears to contribute additional risk that could even alter these students' educational trajectories. Indeed, our results suggest that a midyear transfer disrupts students' curricular and extracurricular trajectories in ways that shape their transitions to college. Moreover, in a separate analysis, we find that midyear transfer students are less likely to graduate with an on-time, standard high school diploma compared with summer transfer students and nontransfer students, possibly because they are more vulnerable to course credit losses at both their former schools and new schools.

Although it is encouraging that our findings suggest that midyear transfer students are no less likely to attend a two-year college compared with similar others who did not transfer or who transferred during the summer, optimism about this finding is tempered when one considers the small proportion of two-year students who successfully transfer to a four-year institution (Berkner and Choy 2008). For those who do transfer to a four-year college, however, research suggests that two-year college transfer students experience challenges that lead to lower odds of bachelor degree completion (Hoachlander et al. 2003). Thus, transferring midyear may place students on an even riskier trajectory in the future. When we locate these students' lives and their midyear transfers within a longer trajectory, it becomes apparent that the midyear transfer is simply one disruption that is often preceded by prior school changes and may be followed by another risky transition—that from a two-year college to a four-year college.

Summer transfer students are the most advantaged group among transfer students before they transfer and with respect to postsecondary matriculation; however, summer transfer students are more disadvantaged than nontransfer students before they transfer and appear to be more disadvantaged with respect to highly selective postsecondary matriculation. We hesitate to draw firm conclusions from these results given the small number of summer transfer students who attend a highly selective university; however, our results suggest that summer transfer students are less likely to attend a highly selective university compared with nontransfer students, net of preexisting differences between these groups. During the last two years of high school, students who are on a trajectory to attend a four-year college and possibly a highly selective school take advanced courses, earn high grades, perform well on standardized achievement tests, and participate and hold leadership positions in extracurricular activities. All of these factors contribute to students' portfolios in the highly competitive arena of college admissions. Our findings suggest that net of pretransfer characteristics, summer transfer students' lower GPAs and lower levels of math course-taking and extracurricular involvement after they transfer play a substantial role in their lower odds of attending a highly selective university.

We suspect that in addition to the direct impact that curricular and extracurricular disruptions have on the type and selectivity of college that students attend, these disruptions may affect transfer students' transitions to college indirectly through social mechanisms. Valuable school-based relationships often form through students' coursework and extracurricular participation. For example, extracurricular activities are important sources of social networks and provide students with faculty mentorship (Eccles et al. 2003). Additionally, students form friendships in a particular line of course-work that later provide the momentum to pursue academic challenges. Thus, a curricular disruption may disrupt a student's academic and social position since each school has a unique social structure based around clusters of coursework (Frank et al. 2008).

The curricular and extracurricular measures we have available both before students transfer and after students transfer explain a nontrivial amount of the associations between the timing of a transfer and type and selectivity of college matriculation, but these factors do not explain away the significant relationships we observed between a midyear transfer and type of college matriculation. Although we lack the appropriate relationship measures in ELS, we suspect that the social repercussions of a transfer may also directly affect students' transitions to college. For example, students who transfer schools during the middle of the year may have a hard time developing relationships with teachers or guidance counselors—key sources of information about college and potential writers of college recommendations. Midyear transfer students may even miss formal college guidance counseling events if their school only provides them at certain periods of the year. Future research should explore the social repercussions of a high school transfer and how they may vary by whether the transfer aligns with the structure of the school year.

Current research on policy recommendations for this group of students is limited, although Rumberger (2003) suggests a host of policies that would directly help midyear transfer students adjust academically and socially at their new school. For example, he recommends that schools prepare for new student arrivals by ensuring extra spaces in required courses, creating independent studies for course credit, and using a variety of methods to encourage extracurricular activity participation and friendship formation. The development and implementation of these types of policies will likely not prove straightforward or simple, however. Calendars and schedules are a strong force in shaping the “hidden rhythms” of our everyday lives (Zerubavel 1981), and the academic calendar is no exception. As Orellena and Thorne (1998:446) state, “School districts across the nation map daily school schedules and yearly school calendars with precision, revealing an obsession with time as a way of organizing and controlling children’s educational experiences.” Of course, just as schedules and calendars in our work and social lives can promote group solidarity (Zerubavel 1981), a school’s schedules and calendars contribute to the development of a sense of community and belonging among students, as well as knowledge accumulation over the high school career and during the school year. Unfortunately, those students who transfer during high school interrupt their high school career, school year, or both, making it difficult for them to transition smoothly and without disrupting schooling processes that may later affect their transitions to college. The case of midyear transfers represents only one example of how the highly time-bounded nature of schools influences students’ educational outcomes, and future educational research on both K-12 and postsecondary transfers may benefit from considering this often ignored dimension of schools in shaping students’ educational trajectories.

## CONCLUSION

Our study underscores the notion that the time at which a transition occurs “can have enduring consequences by affecting subsequent transitions” (Elder 1998:7). Our study suggests that although changing high schools may be a function of a variety of choices and circumstances, all transfer events are shaped by the interaction between temporal and structural forces. In this case, the organization of the academic school year is such that midyear transfer students are harmed most, in part through disrupting the curricular and extracurricular processes that are organized around the academic school year. We suggest that future research consider the degree to which a school transfer aligns with the structure of the school year when examining other educational outcomes and explore more fully the academic and social mechanisms through which this dimension of a transfer matters.

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## Biographies

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**Table 1**

Weighted Proportions or Means and Standard Deviations by Transfer and Timing Status

	Non-Transfers	Summer Transfers	Mid-Year Transfers
<b>Dependent Variables</b>			
Type of College Matriculation			
No college (ref)	0.19	0.28	0.48
Two-year	0.31	0.37	0.35
Four-year	0.50	0.35	0.17
Selectivity of Four-Year College			
Highly selective	0.34	0.21	—
Not highly selective	0.66	0.79	—
<b>Independent Variables</b>			
<i>Mobility and Background</i>			
Residential Move b/w 10th & 12th # of Previous Transfers			
Never transferred (ref)	0.49	0.27	0.32
One transfer	0.24	0.24	0.20
Two transfers	0.10	0.16	0.19
At least three transfers	0.17	0.33	0.29
Female	0.51	0.50	0.49
Race/Ethnicity			
White (ref)	0.65	0.54	0.43
Black	0.12	0.19	0.21
Hispanic	0.14	0.15	0.24
Asian	0.04	0.05	0.05
Other	0.05	0.07	0.07
Highest Parental Education			
No college degree (ref)	0.47	0.49	0.63
Two-year degree	0.11	0.12	0.11
Four-year degree	0.24	0.22	0.14
Master's/Advanced degree	0.18	0.17	0.12
Family Structure			
Both biological parents (ref)	0.62	0.48	0.40
Stepparent + biological parent	0.15	0.19	0.23
Single parent	0.20	0.26	0.25
Other family composition	0.03	0.07	0.12
Annual Family Income	9.22 (2.27)	8.70 (2.70)	8.75 (2.17)
Native English Speaker	0.88	0.88	0.79
School Sector			
Public (ref)	0.91	0.85	0.93
Catholic	0.05	0.07	0.04
Other private	0.04	0.08	0.03
Urbanicity			

	Non-Transfers	Summer Transfers	Mid-Year Transfers
Urban	0.27	0.36	0.40
Suburban (ref)	0.52	0.46	0.47
Rural	0.21	0.18	0.13
<i>Region</i>			
Northeast (ref)	0.20	0.09	0.18
South	0.34	0.39	0.27
Midwest	0.25	0.24	0.22
West	0.21	0.28	0.33
Average Parental Educ. of School	4.54 (0.99)	4.57 (0.96)	4.29 (0.93)
% Minority of School	31.76 (29.64)	36.92 (30.35)	40.38 (31.37)
<i>10th Grade Academic and Extracurricular Background</i>			
Students' Educational Expectations	5.27 (1.33)	5.11 (1.46)	4.86 (1.48)
Math IRT Score	39.58 (11.67)	36.54 (11.71)	32.62 (10.97)
Reading IRT Score	31.23 (9.50)	29.32 (9.69)	25.76 (9.18)
10th Grade Math Course Level	4.99 (1.50)	4.66 (1.60)	4.27 (1.71)
10th Grade Academic GPA	2.71 (0.84)	2.25 (0.91)	1.90 (0.78)
<i>10th Grade Sports Participation</i>			
Non-Participant (ref)	0.42	0.58	0.50
Participant	0.51	0.35	0.42
Leader	0.07	0.07	0.08
Academic Club Involvement	0.17	0.13	0.07
Other Club Involvement	0.48	0.42	0.38
Behavioral Problems Index	0.17 (0.31)	0.29 (0.44)	0.37 (0.49)
<i>Post-Transfer Curricular &amp; Extracurricular Measures</i>			
<i>12th Grade Math Course Level</i>			
> 10th Grade Math Level (ref)	0.54	0.36	0.32
No Math Course	0.34	0.50	0.53
10th Grade Math Level	0.12	0.14	0.15
12th Grade Academic GPA	2.80 (0.80)	2.45 (0.86)	2.27 (0.83)
<i>12th Grade Interscholastic Sports</i>			
Non-Participant (ref)	0.59	0.74	0.76
Participant	0.24	0.19	0.16
Leader	0.17	0.06	0.08
Academic Club Involvement	0.37	0.26	0.17
Other Club Involvement	0.60	0.46	0.48
On-time High School Diploma	0.98	0.87	0.78
(ref: GED or delayed hs diploma)			
N=11,100	10330	530	240

Table 2

Average Marginal Effects on Probability of Type of College Matriculation

Variables	No college				Two-year College				Four-year College			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Timing of transfer (ref: nontransfer)												
Midyear	0.241***	0.164***	0.079**	0.057*	0.126***	0.091*	0.029	0.052	-0.367***	-0.254***	-0.107**	-0.089*
Summer	0.079***	0.043*	-0.004	-0.030	0.066*	0.065**	0.033	0.033	-0.145***	-0.107***	-0.029	-0.003
<i>Mobility and background</i>												
Residential move between 10th and 12th		0.030*	0.021	0.020		-0.023	-0.032	-0.034*		-0.007	0.011	0.014
No. of previous transfers (ref: none)												
One		-0.001	-0.006	-0.007		0.005	0.000	-0.002		-0.004	0.006	0.010
Two		0.018	0.002	-0.001		0.025	0.008	0.004		-0.043**	-0.010	-0.002
At least three		0.026*	0.006	0.003		0.025	0.007	0.004		-0.050***	-0.013	-0.007
<i>Prerequisite curricular and extracurricular measures</i>												
10th grade math course level			-0.016***	-0.016***			-0.005	-0.006			0.021***	0.022***
10th grade academic GPA			-0.065***	-0.030***			-0.061***	-0.033**			0.126***	0.062***
10th grade sports (ref: nonparticipant)												
Participant			-0.051***	-0.032**			-0.027*	-0.015			0.077***	0.047***
Leader			-0.021	-0.002			-0.047*	-0.036			0.067**	0.038
10th grade academic club involvement			-0.022	-0.007			-0.002	0.006			0.024	0.001
10th grade other club involvement			-0.019*	-0.008			-0.001	0.007			0.020*	0.001
<i>Posttransfer curricular and extracurricular measures</i>												
12th grade math course level (ref: > 10th grade math level)												
No math				0.042***				0.061***				-0.103***
10th grade math level				0.040**				0.014				-0.054***
12th grade academic GPA				-0.045***				-0.033***				0.078***
12th grade sports (ref: nonparticipant)												

Variables	No college				Two-year College				Four-year College			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	Participant				-0.023*				-0.009			
Leader				-0.041**				-0.031				0.072***
12th grade academic club involvement				-0.018				-0.023				0.042***
12th grade other club involvement				-0.024**				-0.012				0.036***
On-time high school diploma (ref: GED or delayed high school diploma)				-0.118***				0.043				0.075

Notes: Model 2 also controls for sex, race/ethnicity, age, parental education, family structure, family income, native English speaking status, urbanicity, region, school sector, % minority, and average parental education of school. Model 3 also controls for students' educational expectations, whether the student has ever been retained, and math and reading Item Response Theory scores.  $N = 11,100$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

**Table 3**

## Average Marginal Effects on Probability of Attending a Highly Selective College

Variables	Model 1	Model 2	Model 3	Model 4
Summer transfer (ref: nontransfer)	-0.149***	-0.144***	-0.077*	-0.056
<i>Mobility and background</i>				
Residential move between 10th and 12th		0.012	0.010	0.013
No. of previous transfers (ref: none)				
One		0.008	0.014	0.017
Two		0.010	0.014	0.021
At least three		-0.043	-0.026	-0.017
<i>Pretransfer curricular and extracurricular measures</i>				
10th grade math course level			0.019*	0.020*
10th grade academic GPA			0.135***	0.095***
10th grade sports (ref: nonparticipant)				
Participant			0.020	0.012
Leader			-0.003	-0.010
10th grade academic club involvement			0.024	0.013
10th grade other club involvement			0.025	0.011
<i>Posttransfer curricular and extracurricular measures</i>				
12th grade math course level (ref: > 10th grade math level)				
No math				-0.085***
10th grade math level				-0.004
12th grade academic GPA				0.032*
12th grade sports (ref: nonparticipant)				
Participant				0.006
Leader				0.013
12th grade academic club involvement				0.050**
12th grade other club involvement				0.030

Notes: Model 2 also controls for sex, race/ethnicity, age, parental education, family structure, family income, native English speaking status, urbanicity, region, school sector, % minority, and average parental educ. of school. Model 3 also controls for students' educational expectations, whether the student has ever been retained, and math and reading Item Response Theory scores.  $N = 9,130$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .