It Is Not Just About Attending College Anymore

I, like the other authors of this book and, indeed, most Americans, was brought up on the idea that attending college was a crucial decision. How often did we hear someone say, “If only she had gone to college” or “It would have made all the difference if he had enrolled in college” or “I would have pursued a different career if I had not gone to college”? Most people believed in the transforming role of college attendance. Some people even invested it with mythic importance that was more emotional than analytic (e.g., “all Americans are descended from immigrants”). Nevertheless, I have no doubt that many of the statements we heard were true. There was a sizeable group of people who were just on the margin of attending or not attending college and for whom college was transforming. We probably all know at least a few people for whom college opened “a new heaven and a new earth,” yet who might easily not have gone to college at all, had circumstances been a little different.

If there is one theme of this book, it is that this group of people no longer exists. Put more bluntly, it is not about attending college anymore. The simple margin of whether to attend is not where the action is. This is not to say that college is not transforming: It is, for some people, but they are apparently people whose attendance decision is not easily swayed by circumstances. This is not to say that college decisions are not important: They are, but the important decisions are more complicated. The action is not in whether a student attends, but which college he attends (in-state or out-of-

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state, two-year or four-year, more or less selective) and how he attends (continuously or sporadically, full-time or part-time, immediately after high school graduation or delayed). Simply put, it is not college attendance that is interesting, but college choices—thus the book’s title.

Often, writers of introductions to multiauthor volumes dread the task of finding a common theme among the chapters while also doing justice to their diversity and richness. I am fortunate. My theme (it is not just about attending college anymore) simply fell out of the chapters that follow, distinct as they are. We did not begin writing this book with the plan of demonstrating that the attendance margin was no longer interesting. We began with two ideas. First, we wanted to illustrate what researchers could do with the best methods and latest available data on colleges. Recent years have witnessed great improvements on both fronts, and the advent of massive data sets based on students’ records has allowed us to use exemplary empirical techniques. Second, we wanted to explore the newest, most underinvestigated topics in higher education. Some were underinvestigated because they dealt with very recent policies: education savings accounts, higher education tax credits, and state merit scholarships. Other topics were underinvestigated because they dealt with problems that, while not new, have only recently risen to prominence: the lack of persistence among college students and the role of out-of-state students at public universities. Still other topics were underinvestigated because they dealt with problems that, while not new, have only recently risen to prominence: the lack of persistence among college students and the role of out-of-state students at public universities.

This book has its roots in a conference where we authors (and many other researchers) listened instead of spoke. We heard from chief practitioners of higher education: deans and provosts, college advisors, college admissions chiefs, designers of financial aid, and leaders of advocacy groups. They told us which new policies needed analysis, which old questions needed new answers, and which were the up-and-coming trends.

None of the participants at that conference suggested that the attendance margin had given place to other college choices. On the contrary, the practitioners mainly advised us to analyze policies that they (and we) believed had substantial effects on attendance. Conference participants would typically phrase their questions in terms of attendance—for instance, “How do states’ merit scholarship programs affect attendance?” Even at the very recent conference where we presented these chapters, participants hesitated to announce that the attendance margin was passé, despite the evidence piling up around them. Yet, rereading these chapters, the conclusion is unescapable. Again and again, we learn that a new or important policy has little effect on attendance but does significantly affect students’ other college choices.
What does it mean and why does it matter that the college attendance margin is passé? What it means is that opportunities to attend college have sufficiently expanded so that almost every young person who is eligible and likely to benefit from college does try it at some point, in some form. The vast majority of seventeen-year-olds in the United States claim that they plan to attend college, and the vast majority do. How and when they attend are another matter. Put another way, college education has an extensive margin and an intensive margin. It appears that the extensive margin is now exhausted, while the intensive margin remains active.

A skeptic might say that we have always known that the intensive margin was important and that I am belaboring the point. While I could see where the skeptic was coming from, I would have to disagree. On the one hand, many families do believe that intensive-margin decisions, like where and how to attend college, are important. Indeed, the fact that policies affect these decisions demonstrates that families are thinking about them. On the other hand, families have very little evidence on which to base their intensive-margin decisions, such as “Does it matter whether I attend college right away?” and “Does it matter whether I begin at a two- or four-year college?” and so on. Families are also not being helped by policymakers, many of whom talk exclusively about “access,” attendance, and “making the thirteenth year of education universal.” News flash to policymakers: The vast majority of Americans are getting through the access door, so your policies are mainly affecting what they do once inside it. Mind you, policymakers may be more much more alert to the intensive margin than they let on: It is diplomatic and democratic to ignore the distinctions among colleges and different patterns of college attendance. Nevertheless, the evidence in this book suggests that we need to learn how to assess policies on the basis of their effects on college choice, timing of attendance, and so on.

**Contributors and Contributions**

The fact that I can make such pronouncements with confidence is owing to the authors of this book, whose work is up to date in every way. They not only analyze the newest policies and questions but use the latest, best methods. Every chapter illustrates high-quality analysis. In econometric terms, the results are all well identified. The data are so up-to-date that several authors took “just-on-time” data delivery and wrote chapters that they could not have written a few months before.

Lest the authors get all the credit for their good methods and contemporaneity, let me gratefully acknowledge the vital work of the discussants and the higher education practitioners who spoke at the seminal conference. Our discussants played two key roles. First, they scoured papers for weaknesses in methods, data, and exposition. Their constructive criticism
enabled authors to make the revisions that underlie every really good piece of research. Second, the discussants put the research in context, reminding us how the results fit into the larger questions troubling the higher education community. In the comments published in this volume, the reader will mainly see the discussants in their second role because their detailed criticisms were largely absorbed by the authors. We are very grateful to our discussants: Charles Clotfelter, Thomas S. Dee, Jonathan Guryan, Michael McPherson, Harvey S. Rosen, Michael Rothschild, Bruce Sacerdote, Christopher Taber, and Michelle J. White. We are also grateful to Derek Neal and Doug Staiger, whose conference comments were important to several authors.

The higher education practitioners who gave us a window on the latest concerns in higher education deserve much of the credit for the up-to-dateness of the book. They are too many to list, but we want especially to acknowledge Gary Barnes (University of North Carolina), Pat Callan (National Center for Higher Education Policy), Timothy Lane (Teachers Insurance and Annuity Association–College Retirement Equity Fund [TIAA-CREF], Dan Madzelan (U.S. Department of Education, Office of Postsecondary Education), Gretchen Rigol (The College Board), and Rae Lee Saporin (University of California, Los Angeles [UCLA]).

**College Choices: What We Learned**

Sarah Turner sets up the book by showing the big picture on college-going over the last thirty years. She starts with the observation that policymakers tend to focus exclusively on getting students to start college, neglecting the question of whether they complete college. She demonstrates that this emphasis is misplaced because, although the rate of college attendance has risen significantly, the rate of college completion has been falling. Thus, despite their much higher attendance, today’s high school graduates are only slightly more likely to complete college by age twenty-three than their 1970 counterparts. Also, many of today’s students who eventually complete college progress through college very slowly, with sporadic course-taking and transfers among colleges. All this has occurred during two decades of steady increases in the return to college completion, which suggests that the employers need more college graduates. Employers apparently want prompt completers too: Students who complete college in a sporadic fashion have much lower earnings than those who complete it by age twenty-three.

Having demonstrated that a lack of demand for on-time college graduates is surely not the explanation for falling college completion, Turner investigates other explanations. Because of the large number of possible explanations, Turner does not attempt a definitive study of each. However,
she does exclude some explanations—for instance, changing U.S. socio-demographics do not account for falling completion. She finds empirical evidence for several explanations, which are not mutually exclusive. For instance, some of the decrease in completion is due to the marginal college enrollee having lower aptitude than his earlier counterpart. Some of the decrease is due to federal financial aid having been increasingly focused on marginal enrollees. Additional decreases are due to states having increasingly focused their resources on their inexpensive two-year colleges as opposed to their four-year colleges. Turner leaves us with a question that is still largely open.

Conference participants were willing to propose a variety of other actors for blame. Some suggested that secondary schools were at fault because they had allowed the quality of college preparation to decline (even if the aptitude of the marginal attendee has declined only slightly). Others suggested that colleges were to blame because they increasingly facilitate sporadic attendance patterns by allowing students to pay on a per-course (as opposed to a per-semester) basis, liberally granting transfer credits, and not penalizing students for lack of timely progress. Still other participants focused on students’ lack of realism about the skills and effort required by college.

Susan Dynarski explores state merit aid programs, which have swept through state legislatures, fast becoming state governments’ most important form of support for higher education. Although the Georgia Helping Outstanding Pupils Educationally (HOPE) Scholarship is the best known state merit scholarship, similar programs now exist in most Southern states, some Southwestern states, and a smattering of other states, including Michigan. The typical program grants scholarships to all students with a certain grade point average (such as a B) and/or a certain score on college admission tests. The scholarships are good only at in-state colleges and are frequently generous enough to cover tuition at the state’s public colleges.

Dynarski’s first question is whether state merit scholarships raise college attendance. Carefully exploiting changes in the timing of the programs to identify their effects, she demonstrates that the typical merit aid program raised the enrollment rate by only 1.4 percentage points, an amount that is not statistically significantly different from zero. This lack of an effect suggests that the vast majority of students who get merit scholarships would have attended college anyway. She goes on to show, however, that merit scholarships do alter students’ matriculation decisions. For instance, the scholarships induce students to “upgrade” from two-year colleges to four-year colleges.

Dynarski examines the distributional consequences of the merit aid programs, demonstrating that the typical program is somewhat regressive (they primarily benefit middle- and upper-income families but are paid for by taxes and lotteries that affect lower-income families) and that Georgia’s
Hope Scholarship is dramatically regressive because students cannot simultaneously take it and a Pell Grant (a federal grant for poor students).

Dynarski and conference participants enjoyed animated speculation about the political popularity of merit aid programs, especially in Southern states, which are eager to catch up to and surpass the traditional education-oriented states of the Northeast and Midwest. All states can see that jobs are gravitating towards concentrations of well-educated workers, and the South is perhaps using merit aid as a way to efficiently focus its educational resources on students who are likely to succeed. Conference participants also wondered what will happen when all states have merit programs and realize that the game of keeping the “best and brightest” at home is a zero-sum game (or worse, because it implies inflexible, and thus inefficient, allocation of resources).

Bridget Long shows us that the Hope Credit and the Lifetime Learning Tax Credit (LLTC), enacted in 1998, will almost certainly become by far the largest federal programs for higher education. When everyone eligible for the credits discovers them and takes them up, the federal government will spend more on the credits than it does on the next two largest higher education programs combined. This is both because the credits are reasonably generous ($1,500 to $2,000) and because eligibility for the credits is very broad (a person who merely takes a recreational college course can be eligible). Long finds that the tax credits suffer from the slow information dispersal that plagues other aid programs: Take up of the credits was far below projections during their first three years, but participation is climbing at double-digit rates.

Long’s first question is whether the credits increased postsecondary enrollment among eligible students. She finds that they did not. She then investigates whether the credits altered students’ college choices: They did, causing students to “upgrade” to colleges with greater resources and higher tuition.

William Bennett is usually credited with the hypothesis that colleges attempt to “capture” financial aid and scholarships by raising tuition when government grants and loans become more generous.¹ Long points out that the tax credits have distinctive features that make them less likely to be captured than other government aid. Families receive the tax credits several months after paying college tuition, and the recipient of the credit is typically the parent, not the student. Nevertheless, Long carefully works out which colleges are most likely to engage in capture behavior. These turn out to be public colleges because they can coordinate tuition increases, which would be risky if undertaken unilaterally in the competitive college market. Long then shows that some states did raise their public colleges’

¹. The Bennett hypothesis remains a popular idea, despite a lack of evidence to support it.
tuition in order to capture the federal credits, especially the tuition of colleges with many eligible students.

Conference participants debated whether the tax code is a good vehicle for federal aid to higher education. What seems undebatable is that it is an increasingly important vehicle.

This point is underscored by Jennifer Ma’s study of the newly enacted education savings accounts, which encourage families to save for college expenses by allowing their savings contributions to accumulate tax free. In fact, education savings accounts are very similar to the familiar Roth Individual Retirement Account (IRA) except that the savings are to be spent on college, not retirement. The federal education savings accounts (Coverdell Accounts) allow families to save up to $2,000 per child per year. The state-sponsored education savings accounts (529 Plans) have no annual limit on savings and have high overall savings limits as well. Some 529 Plans even make contributions tax deductible. In short, education savings accounts should be extremely attractive savings vehicles for many families who face future college costs.

Some commentators worry that families will not save more when offered the chance to use education savings accounts: Perhaps they will merely move existing savings from regular accounts to education savings accounts. Such behavior would defeat the purpose of the accounts. Readers familiar with the literature on retirement will recognize that the same concern haunts IRAs and 401(k)s. Using new data that appear to be the only data that can address this concern, Ma shows us the first empirical evidence on the savings effect of the education savings accounts. To control for families’ preexisting propensity to save, she employs several alternative techniques, including recently developed propensity score methods. Part of her study focuses particularly on families who already have IRA accounts. Since they are habitual savers already familiar with tax-advantaged savings accounts, they are perhaps the most likely to move existing savings into education savings accounts. Ma does not find evidence that education savings incentives reduce other household savings; Education savings accounts apparently do raise savings.

Conference participants thought that education savings accounts will eventually be an important prong of government support for higher education. If parents start saving when their child is small, not only will they enjoy substantial benefits, but their child will also know that he should prepare for college during his key years of secondary school. Observers have long speculated that teenagers who are unsure about whether their families are prepared to support them in college are teenagers who do not prepare well for college.

Poor students in the United States are eligible for the Pell Grant, which is intended to help them pay for college education without undue financial

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hardship. That is, the Pell Grant is designed to help students stay in college. Yet most previous studies of the Pell Grant suggest that it has no effect on college completion. Some studies have even claimed to find that the Pell Grant reduces college completion, leading observers to speculate that the Pell Grant might induce students to enroll in college frivolously so that they soon drop out. Eric Bettinger starts with this puzzle and demonstrates that previous studies do not account sufficiently for the fact that Pell Grant recipients are more likely to drop out of college ex ante.

Using unparalleled administrative data on every student in Ohio who applies for financial aid, Bettinger provides convincing estimates of how Pell Grants affect a student’s probability of staying in college. Because he has complete administrative data, he is able to identify those students for whom the Pell Grant changed exogenously between their freshman and sophomore years (this occurs largely because a students’ family composition changes through a sibling being born or leaving home). He finds that students whose Pell Grant rose were slightly more likely to stay in college; students whose Pell Grant fell were slightly less likely to stay in college. That is, the Pell Grant does appear to work as designed: It helps students stay in college. Bettinger concludes by noting that even if the Pell Grant does not have a dramatic positive effect on college completion, it is surely important to know that previous studies were wrong when they concluded that the Pell Grant induced students to drop out.

Conference participants were excited by the possibilities of data like Bettinger’s, which allowed him to use empirical techniques that demand a great deal of data: simulated instrumental variables and regression discontinuity. Readers may enjoy Bettinger’s chapter as much for the display of methods and data as for the results.

Hoxby and Avery investigate how students respond to the packages of financial aid and scholarships they are offered. They focus on high-aptitude students because such students are offered the most complex and attractive packages of aid. Interestingly enough, Hoxby and Avery had to create a survey and gather data from more than 3,200 students to research this question. This is because even very large surveys, such as the U.S. Department of Education’s surveys of over 50,000 students, contain tiny numbers of high-aptitude students and are not oriented toward gathering the details of the complicated scholarship packages they are offered.

Using econometric methods especially suited to studying college choice (conditional logit), Hoxby and Avery identify how each student responds to his menu of college options, each with its own financial package and college characteristics. Their first question is whether college students seem broadly rational when making college choices. The answer is yes: The typical high-aptitude student is sensitive to college characteristics like tuition (lower tuition is more attractive) and the aptitude of fellow students (higher peer aptitude is more attractive). Although students from different
backgrounds exhibit slightly different college choice behavior, the differences are not dramatic; most college choice behavior is shared by the entire array of high-aptitude students.

Hoxby and Avery go on to ask how students respond to the various components of their financial aid packages. They find that about two-thirds of students do alter their college choices in response to more generous grants, loans, and work-study. The remaining third appear to be indifferent to aid packages, largely because they are well off enough to be swayed by other college characteristics, such as the peer group and resources it offers.

Among the two-thirds of high-aptitude students whose decisions can be swayed by aid packages, about half respond to aid like “rational” investors in their own human capital, and half do not. The rational investors accept only aid offers that are more than generous enough to offset the reductions in college resources that are associated with the aid. The remaining students do not look like rational investors because they are excessively attracted by loans and work-study—for instance, they like a dollar of loans as much as a dollar of grants. They also are attracted by superficial aspects of a grant, like its being called a “scholarship” and its being front-loaded. They care more about the share of comprehensive costs that a grant covers than the actual amount of the grant.

Hoxby and Avery speculate about what explains the irrational students: naïveté or a simple lack of cash. Open-ended responses to their survey suggest that naïveté may be the more important explanation. Conference participants were divided in interpreting the results. Some thought the glass was half full: Most students seem to understand financial aid offers and act accordingly. Some thought the glass was half empty because aid packages seemed to confuse a substantial minority of students—and high-aptitude students at that.

Rizzo and Ehrenberg begin by observing that different state universities pursue very different strategies with respect to nonresident enrollment and in-state and out-of-state tuition levels. Some state flagship universities charge high out-of-state tuition and allow nonresidents to make up a significant minority of their students. They may do this in order to raise revenue, but they may also be using nonresident students to raise peer quality. Other state flagship universities pursue entirely different policies. Some sharply limit the number of out-of-state students. Some charge out-of-state tuition that is similar to in-state tuition. Some even sign tuition reciprocity agreements so that out-of-state students pay in-state tuition. What explains these diverse strategies? Rizzo and Ehrenberg explore explanations based on politics, demographics, income, history, university governance, and the local availability of private colleges.

The challenge Rizzo and Ehrenberg face is that colleges make a lot of decisions simultaneously. For instance, they do not choose their in-state tuition and student body first and only then turn to setting out-of-state tu-
ition and admitting nonresidents. They have to take their out-of-state policies into account when setting their in-state policies and vice versa. Thus Rizzo and Ehrenberg must jointly estimate a college’s choice of in-state tuition, out-of-state tuition, in-state admissions, out-of-state admissions, and tuition reciprocity agreements. This is a difficult problem, and the authors meet it by using a long panel of data. This allows them to see how colleges change their policies in response to changing circumstances. They also conducted their own survey of tuition reciprocity agreements.

Rizzo and Ehrenberg find that most public flagship universities seem not to use nonresident enrollment primarily as a revenue-generating strategy. Instead, the institutions appear to enroll nonresident students in order to raise their peer quality. The authors also find that state universities enroll nonresidents in order to achieve economies of scale in programs that would be too small for cost efficiency with in-state students only. Rizzo and Ehrenberg show population pressure probably explains why certain states strictly limit out-of-state students who could be a potential source of revenue. California, for instance, finds it hard to build colleges fast enough to cope with its growing student population. Conversely, states like Vermont have no population pressure and welcome out-of-state students. Conference participants were intrigued by the political and historical factors that make otherwise similar states, like Ohio and Michigan, pursue different strategies.

Avery and Kane are motivated by two puzzles that emerge from previous studies. First, students react much more to changes in tuition than they do to equivalent changes in aid or in the wage gain associated with college. This suggests that students pay more attention to tuition, which is easy to observe, than to costs and benefits of college that are more difficult to decipher. Second, survey data have long shown that students from low-income and minority families display a sort of cognitive dissonance about their likelihood of attending and completing college. Even when they are not taking the steps necessary to get into college, many say that they expect to get baccalaureate degrees.

In a major effort that combined surveying and mentoring, Avery and Kane collected data from three inner-city Boston high schools and a public high school in a middle to upper-income Boston suburb. The suburban students were simply surveyed, but inner-city students who expressed an interest in college were assigned to mentors who guided them through the college application process. The mentors were Harvard undergraduates, who are about as skilled in the application process as anyone could be. In fact, between their own recent experience and their training, the mentors were probably significantly better informed about applying to college than were the parents of the suburban students.

Avery and Kane first asked whether the suburban students started with better information about the costs and benefits of college. If they did, it
might explain why they were taking concrete steps to get into college while inner-city students were not. This first result surprised Avery and Kane: The suburban and inner-city students had very similar information about the costs and benefits of going to college. The two groups had strikingly similar estimates of college tuition and the wage gain associated with college. In short, the evidence suggested that a simple information gap was not the problem and that the mentors would need to do more than relay information if they were to alter the behavior of inner-city students.

Avery and Kane then investigated whether mentoring, which included help with scheduling college admission exams and completing applications, raises an inner-city student’s probability of enrolling in college. They find that it does.

Even so, a substantial minority of the inner-city students continued to exhibit a sort of cognitive dissonance. Even when mentored, they simultaneously failed to take adequate steps to get into college and still expressed a high degree of confidence about getting a baccalaureate degree.

Conference participants were wondered about longer term outcomes among the inner-city students who received mentoring. Will the mentoring simply have boosted their probability of attending? Will they quickly drop out or, instead, be more likely to attain their goal of a baccalaureate degree? These are questions that Avery and Kane must answer later; they were some of the authors who took just-on-time delivery of their data.

Finally, Winston and Zimmerman study peer effects in college. I have consciously kept back their study for the end of the book (and the end of this summary) because peers are a theme of almost sublime importance in the economics of college education. Until one has studied the choices of students and college, it is hard to appreciate why it matters so much whether peer effects exist and what they are like. If the reader looks back over the chapters already described, however, he will see that peers bob up again and again. They help explain why students upgrade when given tax credits, why states create merit scholarships to encourage students to stay in-state, why high-aptitude students receive the array of aid they do, and why public universities enroll nonresident students. Most studies of college education implicitly assume that peer effects exist, not because the researchers believe in peers per se, but because the researchers just cannot make sense of what they see unless they attribute some role to peers. This is Winston and Zimmerman’s first point: They explain, in an admirably clear way, why it is so important that we learn about peer effects. They also explain why peer effects need to be nonlinear. I will leave the details to them, but I will briefly state that the colleges we see do not make sense unless some arrangements of peers produce more learning than others. If rearranging peers did not make any difference on net (one student’s loss of a good peer was exactly offset by another student’s gain of that peer), then the peer arrangements that we see would not arise.
Winston and Zimmerman provide us with some of the best evidence on peer effects in college. They use a “natural experiment” that takes place at all colleges that randomly assign freshmen roommates. A randomly assigned roommate is a randomly assigned peer. If a high-achieving peer is good for a student’s own achievement, then being assigned a roommate with higher incoming achievement should raise his achievement. Observe that the natural experiment avoids a fundamental problem that can plague studies of peer effects: Most peers are not assigned randomly. A person’s own choices affect who ends up being his friends and fellow students. Thus, it is normally hard to tell whether two high-achieving students are friends because their similarity drew them together or because they were friends first and then influenced one another.

Winston and Zimmerman show us the results from three such natural experiments (three different colleges). They also carefully survey the evidence from similar natural experiments in a few other colleges. They conclude that peer effects do exist, in the expected direction: a higher achieving peer is better for a student’s own achievement. They also find some evidence that peer effects are nonlinear. Roughly speaking, middle-achieving students are sensitive to low-achieving peers, but high-achieving students are not. Also, high-achieving students are especially sensitive to one another.

The conference participants emphasized that evidence like Winston and Zimmerman’s is just the tip of the iceberg. This is because roommates at a selective college vary only so much and because a student’s roommate is only one of many peers with whom he interacts. If we could observe the full range of possible peer matchups, we might find much larger peer effects.

Next on the Agenda for the Economics of College Education

Reviewing these chapters makes me eagerly anticipate the next decade of economic research on college education. I cannot regret the passing of the era in which all research was expected to end in the question, “Did attendance increase?” While we will not neglect attendance, we will expect to look at a richer set of questions: which college to attend, when to attend it, and how to pay for it. Our data will undoubtedly continue to improve, and we should be able to provide evidence that allows both families and policymakers to make their college choices better.