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Behavioral barriers transitioning to college

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A B S T R A C T

This paper presents a review of mostly experimental evidence demonstrating the potential usefulness of simplifying the college admission and enrollment process. Seemingly small differences in the process of students transitioning to college often determine whether some matriculate or not. Behavioral models that imply the possibility of sub-optimal long-run outcomes may be needed to better explain these results. We argue that the model which fits the results best is one where some students are inattentive to their college possibilities and therefore let opportunity slip by. Making the process to get to college easier and more salient helps offset this inattentiveness and prevents some exiting high school from falling through the cracks.

1. Introduction

Roughly one in five of today's high-school seniors in North America don't go on to pursue post-secondary education (Ma et al., 2016). Similar, yet varied, transition rates are present in European countries (OECD, 2016). And, relatively fewer students transition to college from rural areas and disadvantaged backgrounds. One explanation, following the classical human capital investment model described by Becker (1962), is simply that college may not be worthwhile.[1] If students correctly expect the costs from attending college to exceed the lifetime benefits, then stopping at high school makes sense. Some research encourages this explanation by noting that it has proven difficult to measure skill improvement directly for many marginal students who barely get admitted to college (Arum and Roksa, 2011). However, other research finds that even marginal students gain in the long-run by pursuing a postsecondary degree - not necessarily in a Bachelors of Arts or Science program, but at least in some type of two or four-year vocational or general study.[2]

Returns to college certainly vary across individuals, but a recent estimate indicates that the financial returns to a four-year college degree for someone who is on the border of admission is an average of 22 percent (Zimmerman, 2014).[3] The non-financial returns to attending appear significant as well. Increased college attainment has been estimated to improve health outcomes (Buckles et al., 2016), raise geographical mobility (Malamud and Wozniak, 2012), improve outcomes in competitive marriage markets (Lafortune, 2013; Chiappori et al., 2009), and increase the time parents spend with their children (Kalil et al., 2012).[4] College also offers impressive consumption value too, in terms of unparalleled opportunities to socialize with a large number of similarly aged youth, join clubs, try new activities, as well as partake in sports and entertainment activities (Oreopoulos and Salvanes, 2011; Jacob et al., Forthcoming). How much of expected college returns are from signalling and whether better program matches are possible remain open and important questions, but for the ex-ante decision of whether to go on to college or stop at high school, the college investment appears worthwhile.

So why don't more students take advantage of post-secondary education, and how might policies help? Financial costs may certainly be a barrier for some, even with access to government loans and grants (Lochner and Monge-Naranjo, 2012), but a mounting array of evidence suggests that psychological factors also play a substantial role in college enrollment outcomes. Youth are particularly predisposed to the pursuit of immediate gratification and to downplay the future. Research in developmental psychology and neuroscience suggests that youth are worse than adults at evaluating decisions with long-term consequences; they focus more on the present than their adult selves would, and are inclined to engage in more risk-taking behavior (Lavecchia et al., 2016). These psychological factors, therefore, may pose significant barriers to careful deliberation on college decision-making.

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[1] We refer to 'college' as any traditional two- or four-year post-secondary educational program. Where necessary, we distinguish explicitly between two- and four-year degree granting programs.

[2] See Oreopoulos and Petronijevic (2016) and Barrow and Malamud (2015) for summaries of the empirical research.

[3] See Ost et al. (2016) and Hoekstra (2009) for additional and similarly sized estimates on the financial returns to college education.

[4] See Grossman (2006), Oreopoulos and Salvanes (2011), and Barrow and Malamud (2015) for summaries on the non-financial returns from attending college.

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Behavioral models that imply sub-optimal long-run outcomes may be needed to help explain and predict high school to college transitions. These models also suggest to researchers and practitioners policies that classical economic models would overlook. Such policies often involve changing the way in which choices are presented or simplifying the decision-making process itself, and have been shown to positively affect college outcomes, often at low cost.

While behavioral economics has long garnered attention in the fields of finance (e.g. Benartzi and Thaler, 1995; Odean, 1999), saving (e.g. Choi et al., 2002; Madrian and Shea, 2001), and health (e.g. Johnson and Goldstein, 2003), it has only recently started to focus on decisions surrounding education (Lavecchia et al., 2016). Recent field experiments demonstrate the potential that behavioral economics has in affecting positive change in this arena. Arguably the most promising interventions to date focus on helping with the high school to college transition. This paper presents an overview of these experiments, and concludes from them some generalizable mechanisms underlying why they have been, for the most part, successful.

2. Section I – changing college enrollment by changing the enrollment process

Several recent studies demonstrate how seemingly small differences to the process of transitioning to college can nevertheless significantly affect enrollment and attainment outcomes. In this section, we first look at examples that highlight differences in the process of applying or obtaining financial aid. While the amount of aid certainly impacts the college-going decision, an aversion to borrowing may play an equally or even more important role. We also discuss several interventions that have demonstrated how simplifying the financial aid process can make the difference between going or not going to college. We then discuss some studies which simplify the application to go to college, as well as the choice of which program of study to apply for. Finally, we discuss attempts to help students through remaining registration and course selection steps during the summer.

2.1. Behavioral interventions that target college costs

An inability to finance college through borrowing can impede realizing large gains to schooling. Long-term benefits from attending college occur in the future, whereas the cost to attending college is immediate. For this reason, governmental and institutional financial aid for low-income families is often employed to improve the welfare of prospective students. Although not always effective in removing liquidity constraints entirely (Lochner and Monge-Naranjo, 2012; Oreopoulos and Petronijevic, 2013), financial aid has been shown to increase college access (e.g. Avery et al., 2006; Fack and Grenet, 2015; Dynarski, 2003; Angrist et al., 2016a; Ford and Kwakye, 2016).[5] Some countries like the U.S. have pursued "high-tuition, high-aid pricing" strategies, making it imperative that low- to middle-income families receive financial aid to attend college (Page and Scott-Clayton, 2016).[6]

Even when liquidity constraints have been removed, many potential students do not transition to college (e.g. Bettinger et al., 2012), and even for those who do, many still do not apply for the financial aid that is available to them – a feature common to many countries' financial aid programs (Booij et al., 2012; King, 2004; Kofoed, 2017). For instance, Booij et al. (2012) note that in the Netherlands, only 35% of available loan-based financial aid is utilized by post-secondary students. Further, changes to effective tuition costs have been shown to have little impact on college enrollment rates (e.g. Bulman and Hoxby, 2015; Hoxby and Bulman, 2016). One explanation for these findings, consistent with the traditional investment model, is that students and their families lack complete information about the financial costs and benefits of post-secondary education, and are thus unwittingly optimising over an incomplete information set. In support of this explanation, some studies have shown students often overestimate the tuition costs of further education, have inaccurate beliefs about the returns to college education, and are unfamiliar with what financial aid is available to them (e.g. Avery and Kane, 2004; Johnson et al., 2011). Dynarski and Scott-Clayton (2006) note that it is especially likely for prospective low-income students to be first-generation college applicants and have fewer peers engaging in the application process, reducing informal information transmission mechanisms.[7]

Increasing the salience and availability of information for prospective college students has therefore been an important endeavour for many researchers and practitioners. To understand how best to do this – especially for lower income students – researchers have conducted field experiments testing the effectiveness of different modes of providing information pertaining to college affordability and its associated financial returns. For instance, Oreopoulos and Dunn (2013) show that among a sample of disadvantaged senior-year high-school students in Toronto, assigning a short video detailing the benefits of post-secondary education as well as asking students to try a financial aid calculator can significantly increase students' intent to attend college and lower their concern over the cost of doing so. Such interventions can impact younger students too, before many important decisions like what high-school classes to enroll are made. For example, McGuigan et al. (2016) report similar findings to Oreopoulos and Dunn (2013) when providing grade 10 high-school students in the United Kingdom with information on tuition fees and the benefits of attending college; and, Dinkelman and Martinez (2014) find that Chilean eighth-grade students who received DVDs detailing financial aid opportunities increase their enrollment in college-preparatory high-school classes. These and the other interventions discussed in this section are summarized in Table 1.

However, while such interventions consistently appear to decrease the information gap for high-school students, the magnitude of these effects is generally unimpressive. Evidence surrounding information effects on actual college enrollment and financial aid take-up is even more mixed. For instance, Kerr et al. (2015) show that among high-school students in Finland, detailing the labor market returns to education during a 45 min in-class information session updated students' beliefs on the returns to pursuing different career fields, but had no effect on college application or enrollment decisions. Further, Hastings et al. (2015) and Busso et al. (2017) both show that among senior-year Chilean high-school students, providing college-specific information about the average returns to further education did not increase students' college enrollment rates.[8] And, using a sample of roughly 80,000 high-school students in the state of Texas who had applied to college, Bergman et al. (2016) show that sending emails and postal-mail informing families of available tax credits and the Free Application for Federal Student Aid (FAFSA) had no effect on students' eventual college enrollment. Together, these results suggest that incomplete information about the financial costs and benefits to attending college is not the only barrier dissuading students from enrolling.

Researchers have thus also pursued behavioral explanations for low financial aid take-up and college enrollment. One such explanation for low college enrollment is that students are averse to borrowing for college expenses. Students are said to be debt averse if they have the

[5] The timing of the promise of financial aid appears to matter for students' enrollment decisions too. For example, Ford and Kwakye (2016) shows how promising financial aid for college in advance of graduation (e.g. grade ten through grade twelve) increases the rate at which low-income students in New Brunswick enroll in college by 6 percent.

[6] See Page and Scott-Clayton (2016) for a review of the literature on barriers to college access in the U.S.

[7] For a detailed overview of the literature on the information gaps prospective students have with regards to financing post-secondary education, see Scott-Clayton (2013).

[8] Busso et al. (2017) also provided students with information about financial aid. While both Busso et al. (2017) and Hastings et al. (2015) found no impact on overall college enrollment, institutional choice was affected by the information interventions.