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**Paper 3 Title:** Is Traditional College Aid Too Little, Too Late? Impacts on High School Outcomes from a Cluster Randomized Trial of an Early College Scholarship for Low-Income Students

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**Background:** From 1940 to 2007, the percentage of U.S. students entering college increased by 50 percentage points (Bailey & Dynarski, 2011), but from 1940 to 1980 the rate at which those entrants completed college decreased by nine percentage points (Bailey & Dynarski, 2011) and since then completion rates have been stagnant (Bailey & Dynarski, 2011). For these reasons, and because of recent rapid advances by economic competitors, there is widespread concern about U.S. education levels and consequences for long-term economic growth (Goldin & Katz, 2008).

The college attainment problem is worse for low-income groups (Goldin & Katz, 2008). College entrants from the bottom income quartile who enter college are about half as likely to graduate as their top-quartile peers. The net result is that eighth graders from families in the highest income quartile are nearly ten times as likely as those from families in the lowest income quartile to receive bachelor’s degrees (Kirst, 2004; Bailey & Dynarski, 2011) and this can be explained only partly by differences in academic skills at the end of high school.

The growing cost of college is one of the underlying causes of both low average entry and persistence and inequality in these outcomes by family income. For more than a century, college tuition has risen at a rate of two to three percentage points about the rate of inflation; and beginning in the 1980s it began increasing at a rate faster than the median income. Financial grants have kept pace with tuition increases while loans have exploded by 600 percent (Geiger & Heller, 2011) with some reports indicating that total debt levels have approached one trillion dollars, exceeding even credit card debt. While grant aid increases have generally kept up with inflation, and loans are widely available, the fact that grant aid and tuition are growing at similar rates still means that absolute gap between the two is rising, increasing direct costs for students.

There are several reasons why rising costs have a great influence on low-income. First, applications for government financial aid are complicated administrative constraints to college entry among low-income groups (Bettinger et al., 2009). Second, even when students manage to fill out the complex forms, grant aid is increasingly based on merit rather than need, so that more grant aid is goes to middle- and upper-income students (Dynarski, 2000). Third, low-income and minority populations over-state college costs by a factor of more than three (Ikenberry & Hartle, 1998). Fourth, low-income students appear to have higher college price elasticities (Dynarski 2003; Goldin & Katz, 2008; Bowen, Chingos, & Deming & Dynarski, 2010). Finally, there is growing inequality in income and wealth and recent evidence suggests wealth in the form of housing value can affect college choices. As Goldin and Katz (2008) put it, this array of cost pressures “leaves many youth from poorer and middle-income families behind in the pursuit of a college education” (p. 349).

**Purpose/Question:** One possible solution to the college access and success problem for low-income students it to promise more aid to low-income students and to do so earlier, before they are already off track. *The Degree Project (TDP)*
scholarship experiment is the first randomized trial of early aid in the U.S. This paper and presentation will examine the question, what were the effects of TDP on students' first-year high school outcomes and their perspectives on school and college?

**Setting:** All students were initially in Milwaukee Public Schools. Milwaukee is a large urban city located just north of Chicago. For the 2011-12 school year, MPS enrolled 80,098 students, continuing a steady decline from a high of 101,963 in 1997-98. Even with this decline, MPS remains among the largest districts in the country and by far the largest in Wisconsin; as of 2008-09, MPS had the 36th largest district by enrollment in the country. In terms of enrollment by 2011-12 race/ethnicity, MPS was 55.7% black, 23.7% Hispanic, 14.2% white, and 5.3% Asian; black enrollment as a percentage of the overall student population has remained relatively stable over the past 15 years, while the share of white enrollment in the district has continued a decades-long decline and has been replaced on an equally rapid pace by increases in Hispanic enrollment. More than 83% of the district's students qualified for free or reduced price school lunches in 2011-12, 19.7% were students with disabilities, and 9.8% were English Language Learners.

**Participants:** All first-time ninth graders attending the 36 schools are participants, including 2,588 treatment students and 2,464 control students. Data on other students is also used in tests for falsification tests.

**Intervention:** On November 17, 2011, TDP promised students attending half of Milwaukee's 36 public ninth-grade schools a total of $12,000 to pay for college. TDP treatment students will receive TDP funds so long as they graduate from any MPS high school on time within four years of starting ninth grade with at least a 2.5 cumulative GPA (C+/B-) and attend class 90 percent of the time. Nearly identical to those of the Pittsburgh Promise, the GPA and attendance requirements are cumulative across years so that students who fall behind can catch up. In addition, students must complete a Free Application for Federal Student Aid (FAFSA) senior year and each year of college, and attend an eligible college at least half-time. Given the cumulative nature of the program, and the early nature of this analysis, every one of the students initially selected for the promise is still eligible to receive the scholarship funds as of this writing.

TDP scholarships must be used within four years of expected high school graduation, i.e., by the spring of 2019. Students will be able to spend up to half the total scholarship per year if they attend full-time (≥ 12 credits) and half this amount if they attend at least half-time (but less than full-time). (Students cannot generally obtain any type of degree in one year therefore requiring that the funds be spread out over at least two years may facilitate degree completion.) Students need not start college immediately, but must start within 15 months of on-time high school graduation; that is, by fall 2016. For example, students who do not attend college at all in the first year after high school graduation will still have the full scholarship amount to spend, but they would still have to spend the money by spring, 2019.
There are no GPA requirements during college. Students remain in the same treatment condition regardless of whether they switch schools subsequently (though they still have to graduate from an MPS school to receive the money); therefore, this approach does not create a direct incentive for any MPS student to switch schools to receive the treatment. Funds will be distributed through students’ college financial aid packages. Further, to receive the funds, students must be first-time enrollees, degree-seeking and have at least $1 of unmet need. Therefore, while income does not affect initial eligibility it will affect how much funding TDP students receive.

Funding for the scholarships is provided by the non-profit Great Lakes Higher Education Corporation; an anonymous third-party donor is funding the research.

**Research Design:** The 18 TDP schools were selected at random by the researchers on behalf of the program funder via paired randomization. All first-time ninth graders (one cohort) in each TDP treatment school were given the promise.

This is a paired cluster randomized trial. To improve precision, especially in the longer-term college outcomes, I used the following protocol for paired cluster randomization: (a) ranked schools by the college attendance rates (CARs) from recent cohorts, (b) created pairs of schools based on the CAR (e.g., the two schools with the highest prior college enrollment rates form the first pair), (c) randomized one school in each pair to the treatment, and (d) pooled to obtain the overall control and treatment groups. This approach, while rare, maintains internal validity and generally increases statistical power considerably (Bloom, Richburg-Hayes, & Black, 2007; Greevy, Lu, Silber, & Rosenbaum, 2004; Imai, King, & Stuart, 2008; Imai, King, & Nall, 2009).

**Data Collection and Analysis:** We have longitudinally linked de-identified administrative from MPS that includes student-level test scores, grades, attendance, and disciplinary incidents. In addition, MPS conducts extensive surveys of its student and school staff and the district allowed us to add a small number of our own questions to their surveys for purposes of this research. All data sources include both current and pre-treatment measures.

**Findings:** Analyses of the first-year data are ongoing. Given the large investment of Great Lakes and the profile of the study, I have agreed not to put results in writing until the conference.

**Conclusions:** TBA.
Appendix: References


