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Money, mentoring and making friends: The impact of a multidimensional access program on student performance



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ABSTRACT

This study evaluates a comprehensive university access program that provides financial, academic and social support to low socioeconomic students using a natural experiment which exploits the time variation in the expansion of the program across high schools. Overall, we find positive treatment effects on first year exam performance, dropout rates, and final graduation outcomes. We find similar results for access students entering through the standard admissions system and those entering with grade concessions. This suggests that access programs can be effective at improving academic outcomes for socioeconomically disadvantaged students.

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1. Introduction

There is a pronounced global socioeconomic gradient in educational attainment (see Digest of Education Statistics (2007) for USA; Eurostudent (2005) for Europe). Poor attainment by low socioeconomic status (SES) groups limits inter-generational mobility and reinforces socioeconomic inequalities. There are multiple causes for such inequalities including institutional barriers, low quality schooling, credit constraints and low parental investment. A commonly used policy to reduce such inequality is targeted intervention programs by universities to boost the attainment of disadvantaged social groups.

This study contributes to this literature by using a quasi-experimental design to evaluate a comprehensive university access program (AP) which operates at

While access programs are becoming increasingly diverse in their approach to tackling the barriers to progression to university and promoting educational success, the majority of programs focus exclusively on providing financial supports to students. Therefore much of the literature, as demonstrated in a review by Deming and Dynarski (2009), concentrates on the effectiveness of financial aid programs such as Pell Grants and HOPE scholarships. There are also programs that couple financial aid with other forms of outreach initiatives such as academic and social supports. Yet evidence of the effectiveness of these more multifaceted programs is lacking, with only a few rigorous studies adopting experimental designs or convincing natural experiments (see, for example, Angrist, Lang, & Oreopoulos, 2009; Brock & Richburg-Hayes, 2006; Scrivener et al., 2008).

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University College Dublin (UCD) in Ireland. UCD is the largest Irish university with over 20,000 undergraduates and postgraduates and is located in the southern suburbs of Dublin city. The program is provided to students attending disadvantaged high schools that are linked to the program based on a set of eligibility criteria. The program operates a range of pre- and post- university entry support mechanisms which provide financial aid, as well as academic and social support to the student. The AP differs from many of the US-based programs as the aid is not conditional on university grades above attaining a pass. Moreover, disadvantaged students of mixed ability are admitted to the program.

Evaluating the effectiveness of access initiatives targeting disadvantaged students in Ireland is particularly salient as the rate of return to education is higher than in other European countries and is comparable to the US (Trostel, Walker, & Woolley, 2002). Furthermore, educational inequality is relatively large in Ireland where, out of twenty OECD countries, the correlation between father's education and that of their children is highest (Chevalier, Denny, & McMahon, 2009), indicating a need for policies to improve intergenerational mobility.

There is a well-developed literature identifying the effects of financial aid on enrolment to university (e.g., Cornwell, Mustard, & Sridhar, 2006; Dynarski, 2003; Kane, 2003; Monks, 2009). The magnitude of this effect is typically around a 5% or less increase in enrolment per \$1000 reduction in student costs (Deming & Dynarski, 2009). Financial aid can also have a positive effect on university completion rates and graduating on time (e.g. Alon, 2007; Dynarski, 2000; Scott-Clayton, 2011). There is also some evidence that academic support programs, which do not provide financial aid, can be effective. Lesik (2007) finds a positive relationship between a remedial mathematics program and student retention using a regression discontinuity design. Likewise, Scrivener et al. (2008) identify a positive treatment effect on first semester academic performance in an experimental evaluation of the Open Doors program in a US community college which provides counselling and monitoring of students. Finally, the Upward Bound project is the longest running federal US program which provides additional academic and social services to disadvantaged students during high school. Myers, Olsen, Seftor, Young, and Tuttle (2004) and Seftor, Mamun, and Schirm (2009) find, using an experimental design, that it had limited effects on high school outcomes and progression to university and earning a degree.

Yet there have been relatively few studies examining multidimensional programs such as the AP discussed here that combine financial aid with academic and social supports. Exceptions include Angrist et al. (2009) which conducted an experimental evaluation of the Student Achievement and Retention (STAR) project in a Canadian university. STAR students were randomly assigned to three groups which received academic support, financial incentives or a combination of both. The program reduced the probability of first year withdrawal by 10% and had positive effects on GPA. These effects were greater for students who received the combined financial and

academic supports package. However, the effects were only significant for female students.

Another study by Brock and Richburg-Hayes (2006) evaluated the impact of a Louisiana needs-based scholarship program on course completion and exam performance of low-income parents attending community college. Students were randomised into a treatment and control group. In addition to the regular financial aid received by the control group, the treatment group were provided with scholarships of \$2000 per annum if they attended at least half-time and attained, on average, a C grade. While both groups could avail of counselling services, the treatment group were obliged to attend student counselling in order to receive the financial aid. The program had multiple positive effects. In particular, the treatment group were more likely to be full-time college students, passed more college courses and earned more credits and were more likely to register for their subsequent years of college.

Aside from the financial, academic and social elements of the Irish access program, one aspect which distinguishes it from the STAR project, is that preferential entry to university is provided to students i.e. some AP students enter university with grades that are lower than the regular minimum grades necessary to be offered a place at university. Although the preferential treatment studied is not based on ethnicity, there are parallels with US and Indian affirmative action programs (Deshpande, 2006).

In the absence of a randomised control trial, our analysis relies on a natural experiment which exploits the gradual and non-systematic expansion of the program over time. The identification strategy compares students from high schools which were chosen to be part of the program in the early years to those that were chosen to join the program in later years. As there were few systematic difference in the characteristics of the high schools which joined the program at different times, a comparison of students from these schools allows us to identify the treatment effect. It is important to note that the data is based on university administrative data, thus we only observe students who attended the treatment university. As a consequence, the control group, who are sociodemographically similar to the treatment group, may be a self-selected group as they chose to attend this university without the safety net of the AP. To overcome this potential selection issue we would require data on all potential eligible students; however our data is restricted to university records. While we can test and control for differences in observables between the treatment and control group, some control students may have better "unobservables" such as higher motivation. Thus, in the presence of positive unobservables among the control group, our results may be an under-estimation of the true treatment effect.

The analysis examines both first and final year outcomes including exam performance, dropout rates, and the probability of not graduating. We also model the impact of the program on final degree classification which is often overlooked in the literature, despite some studies finding a high rate of return to university grades (see Bratti, Naylor, & Smith, 2007; Jones & Jackson, 1990; Schweri, 2004). In

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