A Regression-Discontinuity Evaluation of the Effect of Financial Aid Offers on College Enrollment

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In evaluating the effect of financial aid offers on college enrollment decisions the former cannot be considered exogenous with respect to the latter. This paper shows how idiosyncratic features of an east coast college's financial aid offer process can be exploited to solve this endogeneity problem and to obtain credible effect estimates. More precisely, a key component in the college's aid offer decision is a simple formula used to rank students into a few groups on the basis of several continuous measures of academic ability. As a result, its aid assignment rule has features (discontinuities) which characterize the assignment rule of a powerful, but largely overlooked quasi-experimental design: the Regression-Discontinuity design originally introduced by Campbell and Stanley (1963). It is shown that credible estimates of the financial aid effect can be obtained without having to rely, as in usual selection bias correction methods, on arbitrary exclusion restrictions, and functional form and distributional assumptions on errors. Moreover, it is shown that, without making the connection to the design explicit, several recent studies such as Angrist and Krueger (1991), Imbens and van der Klaauw (1995) and Angrist and Lavy (1996) rely heavily on the Regression-Discontinuity design in identifying treatment effects. More generally, this study provides an illustration of how more detailed knowledge of the selection mechanism can aid in obtaining reliable program effect estimates.

Keywords: Regression-Discontinuity design, program evaluation, selection bias, instrumental variables, financial aid, college enrollment.

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