Evaluating the Effects of Basic Skills Math Placement on Academic Outcomes of Community College Students

T. Melguizo, B. Kim, H. Kosiewicz, University of Southern California; H. Bos, American Institutes of Research; & G. Prather, LACCD

Problem / Need
• In California, more than 50 percent of all community colleges are placed in basic skills math courses; this percentage is higher than the national average (25-40 percent)
• There is considerable debate on the effects and benefits of remediation at the collegiate level.

Study site – LACCD
Los Angeles Community College District (LACCD)
• A diverse student population
• Nine colleges with 130,000+ students
• “Common Data System”
• Large number of observations
• Presumption of national representativeness

Purpose
To evaluate the effectiveness of math placement policies for entering community college students on student academic success.

Methodology
Qualitative methods – Descriptive Analysis
- Describes how students are assessed and placed in math, and the resources available to these students.

Quantitative methods – Regression Discontinuity Design
- Regression Discontinuity Design enables the researcher to “assign” individuals to treatment and control groups based on an exogenously determined cutoff point, which is used to develop a continuous placement score (CPS). Students who take placement tests (i.e., Accuplacer, Compass, MDPT) are assigned to math courses based on these cutoff points; RDD also enables the researcher to make causal statements.

Research Question
What are the effects of various basic skills mathematics paths on the course-taking patterns of community college students?

Placement by Math Level at LACCD

Success Rates by Placement

Placement Rules – LACCD (college)

Placement Pathways - Arithmetic Test

Placement of Students – Arithmetic Test

Results
• Community college students have substantial math remediation needs.
• Students placed in arithmetic (four levels below transfer) spend at least two years in remedial math before they can attempt a math transfer level course.
• Assessment and placement rules varies widely across the 9 colleges of the LACCD.
• The Accuplacer is the most widely test used in the LACCD.
• Students who take the Accuplacer can have very different experiences taking the test.
• LACC is following the placement rules in the AR test.

Next steps
• Run descriptive statistics on placement and success rates by initial math placement in the LACCD.
• Run OLS and RD models on passing Intermediate Algebra in the LACC.

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