

## Authors

Michael Kremer  
The University of Chicago

## Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment

By JOSHUA ANGRIST, ERIC BETTINGER, ERIC BLOOM, ELIZABETH KING,  
AND MICHAEL KREMER\*

*Colombia used lotteries to distribute vouchers which partially covered the cost of private secondary school for students who maintained satisfactory academic progress. Three years after the lotteries, winners were about 10 percentage points more likely to have finished 8th grade, primarily because they were less likely to repeat grades, and scored 0.2 standard deviations higher on achievement tests. There is some evidence that winners worked less than losers and were less likely to marry or cohabit as teenagers. Benefits to participants likely exceeded the \$24 per winner additional cost to the government of supplying vouchers instead of public-school places. (JEL 122, J13, I28)*

While the academic controversy over school providers and school vouchers has raged most intensely in the United States, private schools account for only about 11 percent of U.S. enrollment (U.S. Department of Education, 1998). Moreover, over half of American parents report that they are very satisfied with the public schools their children attend. In the developing world, in contrast, private enrollment as a pro-

portion of total enrollment is 2–3 times higher than in industrialized nations (Estelle James, 1993). Problems with public schools are usually more severe in low-income countries, since the quality and integrity of public sector service delivery is highly correlated with income levels (James E. Rauch and Peter B. Evans, 2000). In Indian schools, for example, a recent study found that one-third of headmasters were absent at the time of the researchers' visit (PROBE Team, 1999), while in Kenya, Paul Glewwe et al. (2000) found that teachers were absent 28 percent of the time. The view that private schools function better than public schools in the developing world has prompted calls for governments in poor countries to experiment with demand-side financing programs such as vouchers (e.g., George Psacharopoulos et al., 1986).

This paper presents evidence on the impact of one of the largest school voucher programs to date, the Programa de Ampliación de Cobertura de la Educación Secundaria (PACES), a Colombian initiative that provided over 125,000 pupils with vouchers covering somewhat more than half the cost of private secondary school. Vouchers were renewable as long as students maintained satisfactory academic performance. Since many vouchers were awarded by lottery, we use a quasi-experimental research design comparing educational and other outcomes of lottery winners and losers. Subject to a variety

\* Angrist: Department of Economics, MIT, 50 Memorial Drive, Cambridge, MA 02142; Bettinger: Department of Economics, Weatherhead School of Management, Case Western Reserve University, Cleveland, Ohio 44106; Bloom: Asian Development Bank, 6 ADB Avenue, Mandaluyong City, MM 0801, Philippines; King: Development Research Group, The World Bank, 1818 H Street NW, Washington, DC 20433; Kremer: Department of Economics, Harvard University, Littauer Center 307, Cambridge, MA 02138. Special thanks go to the survey and field team in Bogotá: Claudia González, Maribel Monsalvo, Ana Gómez, and a dedicated team of interviewers from Javeriana University; in the United States, we had the help of Emily Conover, Helen Lee, Brian Proquinelli, and especially Cristina Estrada. We are also grateful to Jorge Estrada for help interpreting Colombian ID numbers, and to José Uribe for arranging for use of a testing site. Finally, thanks go to the World Bank and the National Institutes of Health for funding, and to Alberto Abadie, Jon Behrman, Adriana Kugler, David Levine, Lant Pritchett, Petra Topolova, and seminar participants at Banco de la República, University of California–Berkeley, Harvard University, MIT, the NBER, Northwestern University, and Princeton University for comments. This document does not necessarily reflect the positions of the Asian Development Bank or the World Bank.

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December 01, 2002