

**Authors**

Miriam Bruhn  
World Bank

David McKenzie  
World Bank

**IN PURSUIT OF BALANCE: RANDOMIZATION IN PRACTICE  
IN DEVELOPMENT FIELD EXPERIMENTS\***

Miriam Bruhn, *World Bank*  
Email: [mbruhs@worldbank.org](mailto:mbruhs@worldbank.org)

David McKenzie, *World Bank, BREAD, CReAM and IZA*  
Email: [dmckenzie@worldbank.org](mailto:dmckenzie@worldbank.org)

**Abstract**

We present new evidence on the randomization methods used in existing experiments, and new simulations comparing these methods. We find that many papers do not describe the randomization in detail, implying that better reporting is needed. Our simulations suggest that in samples of 300 plus, the different methods perform similarly. However, for very persistent outcome variables and in smaller samples pair-wise matching and stratification perform best and appear to dominate the re-randomization methods commonly used in practice. The simulations also point to specific recommendations for which variables to balance on and for which controls to include in the ex-*post* analysis.

*Keywords:* Randomized experiment; Program evaluation; Development.

*JEL codes:* C93, O12.

\* We thank the leading researchers in development field experiments who participated in our short survey, as well as colleagues who have shared their experiences with implementing randomization. We thank Angus Deaton, Esther Duflo, David Evans, Xavier Gine, Guido Imbens, Ben Olken and seminar participants at the World Bank for helpful comments. We are also grateful to Rishi Banerjee for sharing his pair-wise matching Stata code, Joshua Dizon for the LEAP's data, and to Katherine Baugh and Kristen Hensler for providing us with their completed ILS data. All views are of course our own.

# In pursuit of balance: randomization in practice in development field experiments

We present new evidence on the randomization methods used in existing experiments, and new simulations comparing these methods. We find that many papers do not describe the randomization in detail, implying that better reporting is needed. Our simulations suggest that in samples of 300 or more, the different methods perform similarly. However, for very persistent outcome variables, and in smaller samples, pair-wise matching and stratification perform best and appear to dominate the rerandomization methods commonly used in practice. The simulations also point to specific recommendations for which variables to

balance on, and for which controls to include in the ex post analysis.

October 01, 2008