

# Experimental Development Economics

University of Basel  
Faculty of Business and Economics  
Summer School in Law, Business, and Economic Policy

July 16-26, 2018

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## 1. Background

Economic development is a process of trial and error, innovation and experimentation, success and failure. Given the right institutions, some not unfavorable resource endowments, and a bit of luck, incomes can grow, health can improve, and human development can flourish; other times, things don't turn out so well.

While the last 150 years have seen broad improvements in well-being around the world, and deep reductions in poverty have been achieved in just the last 25 years, there remain huge disparities in living standard between and within countries. There is much work to be done before we can claim to have reached a just, prosperous, and sustainable world.

Given the urgency of development challenges, it is imperative that we learn quickly from our mistakes and build robustly on our successes. The hope is that by understanding *what* kinds of innovations and policies “work” to improve the lives of the deprived and vulnerable, and *how* they work, we might be better placed to accelerate the process of development more generally. To that end, this course will provide an overview of empirical methods and analytical techniques for assessing the impact and effectiveness of development innovations at both the product and policy levels.

## 2. Pre-requisites

The course will adopt an empirical microeconomic approach to the subject of measuring development effectiveness. As such, students should have taken courses in Microeconomic Theory and Econometrics, both at the Intermediate undergraduate level. They should also be comfortable with basic calculus.

## 3. Topics

The two-week course will be divided into two roughly equal parts. In the first week, we will discuss randomized control trials (RCTs) as used in to evaluate the impact of policy and product innovations in the developing world. In the second part, we will cover quasi-experimental techniques.

## Week 1

Lecture 1: Impact evaluation and causal inference

Lecture 2: Randomized control trials: The basics

Lecture 3: Statistical inference and power

Lecture 4: Imperfect compliance and Instrumental variables

## Week 2

Lecture 5: Difference in differences

Lecture 6: Regression discontinuity designs

Lecture 7: Matching techniques and further topics

## 4. Assessment

- There will be one homework assignment worth 25%, due at 5pm, Friday, 20<sup>th</sup> July, 2018
  - Assignments should be submitted electronically to [wgj@georgetown.edu](mailto:wgj@georgetown.edu), with subject line: "Basel Assignment"
- Active classroom participation will count for 25%.
- Students will take a 1.5-hour final exam worth 50% on Thursday, 26th July, 2018.

## 5. Readings and resources

There is no textbook for this course. As background, I invite students to read the following books and review papers prior to the course:

- Banerjee, Abhijit V. & Esther Duflo (2011): *Poor Economics*, Random House
- Duflo, Esther, Rachel Glennerster, and Michael Kremer (2007): "Using randomization in development economics research: a toolkit," Centre for Economic Policy Research Discussion Paper No 6059.
- Deaton, Angus and Nancy Cartwright (2016): "Understanding and misunderstanding Randomized Controlled Trials," NBER Working Paper No 22595.
- Karlan, Dean and Jacob Appel (2012): *More Than Good Intentions*, Plume.
- World Bank Development Impact blog: <http://blogs.worldbank.org/impactevaluations/>

## Detailed reading list

The following papers will be discussed during the course

Almond, Douglas (2006): "[Is the 1918 influenza pandemic over? Long term effects of in utero influenza exposure in the post-1940 U.S. population](#)" *Journal of Political Economy*

Angrist, Joshua (1990): "[Lifetime earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records](#)," *American Economic Review*, 80(3)

Angrist, Joshua and Victor Lavy (1999): "[Using Maimonides' rule to estimate the effect of class size on scholastic achievement](#)," *Quarterly Journal of Economics*

Banerjee, Abhijit, Shawn Cole, Esther Duflo and Leigh Linden (2007): "Remedying education: Evidence from two randomized experiments in India," *Quarterly Journal of Economics*.

Blattman, Christopher and Jeannie Annan (2010): "[The consequences of child soldiering](#)," *Review of Economics and Statistics*

Bleakley, Hoyt (2007): "Disease and Development: Evidence from Hookworm Eradication in the American South," *Quarterly Journal of Economics*

Duflo, Esther (2001): "Schooling and Labor Market Consequences of Schools Construction in Indonesia: Evidence from an Unusual Policy Experiment," *American Economic Review*, 91.

Duflo, Esther and Rohini Pande (2007): "Dams," *Quarterly Journal of Economics*, May.

Glewwe, Paul, Michael Kremer, Sylvie Moulin, and Eric Zitzewitz (2004): "Retrospective vs. prospective analyses of school inputs: the case of flip charts in Kenya," *Journal of Development Economics*

Goldstein, Markus, Joshua Graff Zivin, James Habyarimana, Cristian PopEleches, and Harsha Thirumurthy (2013): "The effect of absenteeism and clinic protocol on health outcomes: the case of Mother-to-Child transmission of HIV in Kenya," *American Economic Journal: Applied Economics*.

Habyarimana, James and William Jack (2011): "Heckle and Chide: Results of a randomized road safety intervention in Kenya," *Journal of Public Economics*

Jalan, Jyotsna and Martin Ravallion (2003): "[Does piped water reduce diarrhea for children in rural India?](#)" *Journal of Econometrics*

Jalan, Jyotsna and Martin Ravallion (2012): "[Estimating the benefit incidence of an antipoverty program by propensity score matching](#)," *Journal of Business and Economic Statistics*.

Jayachandran, Seema and Adriana Lleras-Muney (2008): "[Life expectancy and human capital investments: evidence from maternal mortality declines](#)," *Quarterly Journal of Economics*

Maluccio, John and Rafael Flores (2004): "Impact evaluation of a conditional cash transfer program," International Food Policy Research Institute Discussion Paper

Mizala, Alejandra and Miguel Urquiola (2008): "[School markets: The impact of information approximating schools' effectiveness](#)"

van der Klaauw, Wlibert (2002): "[Estimating the effect of financial aid offers on college enrollment: A regression-discontinuity approach](#)," *International Economic Review*