



## Quasi Experiments in Development Economics

Georg-August-Universität Göttingen

Department of Economics

Winter Semester 2017/18

### TEACHING TEAM

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Office hours: By appointment.

### DETAILS

The course deals with common quasi-experimental approaches for measuring causal effects in developing economics. The content focuses on the distinction between correlation and causality and provides students with a statistical toolkit which will allow them to plan and conduct their own independent research. Special attention will be paid to the specific assumptions necessary for each technique to measure causal effect and common threats to identification (such as selection bias). Students will learn how to use quasi-experimental techniques in a very practical manner by solving assignments in Stata and writing referee reports.

### GRADING

- Referee Reports & Problem Sets 50%
- Exam 50%

## BACKGROUND LITERATURE:

- Blundell, R., & Dias, M. C. (2009). Alternative approaches to evaluation in empirical microeconomics. *Journal of Human Resources*, 44(3), 565-640.
- Angrist, J. D., & Pischke, J. S. (2008). Mostly harmless econometrics: An empiricist's companion. *Princeton University Press*.
- Imai K., King, G., Stuart, E. (2008). Misunderstandings between experimentalists and observationalists about causal inference. *Journal of the Royal Statistical Society Series A*, 171(2), 481-502.
- Bärnighausen, T., Oldenburg, C., Tugwell, P., Bommer, C., Ebert, C., Barreto, M., Djimeu, E., Haber, N., Waddington, H., Rockers, P. and Sianesi, B. (2017). Quasi-experimental study designs series–Paper 7: assessing the assumptions. *Journal of Clinical Epidemiology*.
- Bärnighausen, T., Tugwell, P., Røttingen, J.A., Shemilt, I., Rockers, P., Geldsetzer, P., Lavis, J., Grimshaw, J., Daniels, K., Brown, A. and Bor, J. (2017). Quasi-experimental study designs series–Paper 4: uses and value. *Journal of Clinical Epidemiology*.
- Wooldridge, J.M. (2010). *Econometric Analysis of Cross Section and Panel Data*. MIT Press

## TOPICS AND MANDATORY READING

It is required to read the topic's specific chapter of the background literature and the listed readings beforehand. Each topic starts with a theoretical introduction of a quasi experimental method. Acquired knowledge is consolidated in class discussions of the method's assumptions at the example of the compulsory readings listed below. The topic concludes with a demonstration of an empirical application of the respective method in Stata.

- Introduction to quasi experiments and the counterfactual problem (20.10.2017)
- Difference-in-differences and fixed effects models (3.11.2017)
  - Compulsory readings:
    - Draca, M., Machin, S., & Witt, R. (2011). Panic on the streets of London: Police, crime, and the July 2005 terror attacks. *The American Economic Review*, 101(5), 2157-2181.
    - Duflo, E. (2001). Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment. *American Economic Review*, 91(4): 795-813.
  - Further readings:
    - Card, D., & Krueger, A. B. (1993). Minimum wages and employment: A case study of the fast food industry in New Jersey and Pennsylvania (No. w4509). *National Bureau of Economic Research*.
- Instrumental Variables (17.11.2017)
  - Compulsory readings:
    - Iyer, L. (2010). Direct versus indirect colonial rule in India: Long-term consequences. *The Review of Economics and Statistics*, 92(4), 693-713.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review*, 91(5), 1369-1401.

- Further readings:

Angrist, J. D. (1990). Lifetime earnings and the Vietnam era draft lottery: evidence from social security administrative records. *The American Economic Review*, 80(3), 313-336.

- Regression Discontinuity Design (01.12.2017)

- Compulsory readings:

Angrist, J. D., & Lavy, V. (1999). Using Maimonides' Rule to Estimate the Effect of Class Size on Scholastic Achievement. *The Quarterly Journal of Economics*, 114(2), 533-575.

Manacorda, M., Miguel, E., & Vigorito, A. (2011). Government Transfers and Political Support. *American Economic Journal: Applied Economics*, 3:1-28.

- Further readings:

Dell, M. (2010). The persistent effects of Peru's mining mita. *Econometrica*, 78(6), 1863-1903.

Urquiola, M. (2006). Identifying Class Size Effects in Developing Countries: Evidence from Rural Bolivia, *Review of Economics and Statistics*, 88(1), 171-177.

- Matching (22.12.2017)

- Compulsory readings:

Kumar, S., & Vollmer, S. (2013). Does access to improved sanitation reduce childhood diarrhea in rural India? *Health Economics*, 22(4), 410-427.

Lavy, V., & Angrist, J. D. (2001). Does Teacher Training Affect Pupil Learning? Evidence from Matched Comparisons in Jerusalem Public Schools. *Journal of Labor Economics*, 19(2), 343-369.

- Further readings:

King, G. & Nielson, R. (2016). Why Propensity Scores Should not be used for Matching. *Working Paper*.

- Standard error issues (19.01.2018)

- Compulsory readings:

Bertrand M., Duflo E., & Mullainathan S. (2004). How Much Should We Trust Differences-in-Differences Estimates? *The Quarterly Journal of Economics*, 119(1), 249-275.

Fink G., McConnell M., & Vollmer S. (2014). Testing for Heterogeneous Treatment Effects in Experimental Data: False Discovery Risks and Correction Procedures. *Journal of Development Effectiveness*, 6(1), 44-57.

- Further readings:

tba

## TIME SCHEDULE

Date	Type of class	Room
20 October	Lecture	Raum 0.211, Gebaeude Waldweg 26, Altbau
27 October	Tutorial	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
3 November	Lecture	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
10 November	Tutorial	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
17 November	Lecture	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
24 November	Tutorial	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
1 December	Lecture	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
8 December	Tutorial	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
22 December	Tutorial	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
12 January	Lecture	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
19 January	Tutorial	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
26 January	Lecture	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26
2 February	Exam	Raum 6.103, Gebaeude Waldweg 26, Hochhaus: Waldweg 26

Note: There will be **no class on December 15**.

## ASSIGNMENTS

### Referee reports

- For each quasi experimental method students are expected to write one referee report.
- Papers to be refereed and deadlines will be announced in class.
- Referee reports should focus on discussing identifying assumptions.
- Referee reports may not exceed one page.
- It should be written in English.
- Use font style “Times New Roman”, font size 12, 1.5 spacing, margins each 2.5cm.
- Sent your report to Maja. Please name the document as follows: “Report ”X”\_Surname\_Firstname”.

### Problem Sets

- For each quasi experimental method students are expected to apply the respective method using the statistical software STATA in a problem set.
- Assignments and deadlines will be announced in class.
- Students will be allocated to small groups and only one solution per group may be turned in.
- The solution must be in the format of commented do-files.
- Comments should be written in English.

- Sent your solutions to Maja. Please name the document as follows: “PS”X”\_Surname\_ Surname\_ Surname\_...”.
- Contribution to group solutions will be testified in personal appointments with Maja or Cara.

#### CLASS PARTICIPATION

- We expect you to be present during all meetings of the seminar and to participate in class discussions. If you are unable to attend please do not register for this seminar.
- There are no stupid or improper questions, and you should not be afraid of a negative evaluation. Though, it is important for a fruitful discussion that you have read the mandatory reading and have your own thoughts about it.