

**Economics 4610**  
**Economic Development**  
**University of Virginia**

**Instructor:** Shan Aman-Rana

**Office:** 336 Monroe Hall

**Office hours:** Wed 11:30 a.m.-12:30 pm. Other times can be booked through email

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**TA:**

Jessica Canada ([jlc8af@virginia.edu](mailto:jlc8af@virginia.edu))

TA's office hour: Thursday 11:30-12:30pm

**Class time:** MW 3:30-4:45pm

**Class location:** online synchronous

**Description**

A large proportion of the world's population lives on less than \$2/day. The course will equip students to better understand the lives of the world's poor. Specifically, what price distortions and market failures hinder their quest to improve their well-being? Is there scope for policy to help the world's poor? We do not answer these questions with anecdotes. Rather, the course will be based on both theory and empirics that are at the frontier of research. We will refresh our understanding of empirical methods such as: randomized control trials, difference-in-difference and instrumental variables etc. and in the process learn to be critical consumers of evidence.

The course starts off with a study of the concept of development and what can be the role of the state in the process of development. It then examines different measures of poverty and looks at the economic lives of the poor. This is followed by a critical examination of the concept of growth and what classical growth theory means for development. The second part of the course studies inequality. We will explore not just how inequality is measured but also take a closer look at two different types of inequality: land and gender inequality. This is followed by an investigation of two types of market failures i.e. information frictions and externalities, through the lens of health and credit markets. The course concludes with the concept of corruption and whether it can be efficient, how it is defined, measured, and what if anything can be done to combat it.

This course has a strong applied focus. It, therefore, requires a solid understanding of how to read and interpret statistics, as well as a basic understanding of economic principles. Economics 2010 and 3710 (or equivalent) are required; note that you will not be able to take the class without these prerequisites (no exceptions). Economics 2020, 3010/3110, and 3720 are helpful but not required.

**Textbooks and Other Materials**

1. Ray, Debraj. *Development Economics*. Princeton University Press, 1998. This is a slightly more technical treatment of the material, and the source for most of the formal models taught in class. An online version is now available for a significantly lower price than the printed version, and feel free to buy used versions.
2. Abhijit Banerjee and Esther Duflo, *Poor Economics*. Public Affairs, 2011. This is less technical but much more up to date and the best representation of the field of development economics today.

Other readings – both required and recommended – are posted on Collab.

### Statistical Materials

You must understand everything in Appendix 2 of *Development Economics*, before the course begins; you don't have to read it if you already know the concepts. You might also want to familiarize yourself with material from Angrist, Joshua D., and Jörn-Steffen Pischke. *Mastering Metrics: The Path from Cause to Effect*. Princeton University Press, 2014. It is a useful book to understand problems of selection and the latest techniques to evaluate empirical studies. Glennerster, Rachel, and Kudzai Takavarasha. *Running randomized evaluations: A practical guide*. Princeton University Press, 2013 is another extremely useful book. It has good practical advice for running experiments.

### Lecture notes

Lecture notes will be posted to Collab *right before* class.

### Logistics

This is an online synchronous course, which means we will meet for regular class sessions online every Monday and Wednesday at 3:30-4:45, via Zoom. The goal of the first discussion section is to sort out all logistics and the TA will re-explain everything in the first class. Feel free to shoot either of us an email/send a message via MS Teams, if there is any confusion.

Your presence and active participation are required and important to creating the most effective and engaging learning experience. While you are not expected to be on Grounds for exams or class meetings, *it is essential that we all keep our video on during lecture.*

There are many unknowns this fall that could impact our course and university. Delays and disruptions may occur at any time during the course. We will, as a community, need to be flexible and take things one step at a time. I'll post an announcement on our UVACollab site if any shift is suddenly expected. I encourage you to have a plan for communicating with me in case you become ill. In the event that I become ill, I will contact a colleague and/or my department chair to communicate with you about how our course will proceed. Please pay close attention to email communications and/or UVACollab announcements throughout this semester.

Lectures and TA session to be recorded: Recording lectures involves a trade-off. On the one hand recording provides an equivalent educational experience to all students regardless of their location, time zones, home environment, access to technology, or other circumstances. Recording a class and posting it privately for the class is one way to mitigate student absences due to unforeseen circumstances. Having said that I completely understand that many students feel that recording a class competes with another good: the intrinsic value in the kind of open and powerful conversation that animates our classrooms. Recording naturally also raises important questions about privacy and intellectual property.

For the time being, the default for the course is that we will record all lectures and discussion classes. However, recordings will only be shared with a student if there have been extenuating circumstances, which prevented access to a class. It will not be widely available. In any case, if you feel strongly about the idea of recording, please let us know and we can try and accommodate your requests. *Please be aware that per university policy and out of respect to our class community, recordings may not be downloaded, reproduced, shared outside our course, or uploaded to other online environments. Pre-arranged permission from me is required for any recordings made by you. Recordings will be deleted when no longer necessary.*

### Movie, documentary 3pm on last Friday of each month

On the last Friday of each month we plan to hold movie/documentary evenings. These are social events but are an integral part of the course. There are 3 such evenings. Each group can suggest a movie/documentary

and we will choose three to allocate to a Fri afternoon. We will enjoy these events via MS Teams. There is a channel created for these events. Feel free to bring friends and food and drinks.

The movie/documentary should be related to the course. For instance, if I had the power to choose, I would have recommended: [“A girl in the river- the price of forgiveness”](#) or [“Saving face”](#) that is closely related to the gender inequality theme we will cover in the course.

### **Grading and assignments**

#### **Quizzes during lectures or TA sessions (5%)**

There will be 7 surprise quizzes at any random date/time. These surprise quizzes can take place in either lectures or TA sessions. This will be on the material from last lecture only. It will entail 2-4 True/False and or 2-4 MCQs. Quizzes count towards 5% of your final grade.

#### **Section Exercises (5%)**

Participation in various exercises during TA sessions

#### **Group problem Sets (15%)**

Problem sets due in class on the following dates: **02/15; 03/1; 03/8; 4/05; 4/12; 4/19**. They are all available now on Collab and each assignment must be handed in online through collab (as explained by your TA). It is to be handed in **no later than 5pm on the day that it is due**. Homework handed in late will not be graded. No late assignments will be accepted, no exceptions. Solution sets will be posted on Collab. Your lowest graded assignment will not be counted as part of your final homework grade.

Groups have been assigned and sub-teams created in MS Teams. You can use MS Teams to work with your group members, but of course we are just trying to provide an enabling environment. That does not mean that you can only collaborate on assignments through MS Teams. Use whatever software helps. If there is any confusion, feel free to message/email the TA or myself.

Since these are group problem sets, all participants in a group must understand and contribute to all the work handed in. Copying homework from other students, or failing to fully collaborate on joint assignments, will be regarded as an honor violation.

Homework will be graded by the teaching assistant. You will receive your graded problem sets back in the TA sessions.

Grades assigned by the TA are not subject to appeal unless an error was made by the TA (in other words, please don't argue about how many points you think you should have received on a given problem). Your work is expected to be neat and legible, and typing your answers is encouraged. If the TA finds your work too sloppy and/or illegible, it will not be graded, or points will be taken off.

#### **Group presentations on Covid-19 (15%)**

We will hold **10 min group presentations** on **03/10** on the following topic:

- Imagine you are a cabinet minister in a developing country in February 2020.
  - Give a snapshot of the biggest challenges that your government faces during COVID-19.
  - How will your government deal with this crisis?
  - What will be the main trade-offs in these decisions?

Clarity of arguments will be rewarded. Given the time constraint, a kitchen sink of all the problems will be less helpful than a careful and deep discussion of a max of 2-3 challenges. Each member of the group must participate. Q&A will be part of your 10 min, so manage your presentation length accordingly.

Online Mid Term Exam (15%)  
In Lecture, Monday 3/22/2021.

Final Group Project Presentations (20% with 10% grade based on group performance and 10% on individual performance within the group)

You will work in your groups and come up with an experiment; More details are available on Collab in the “Group Project” folder. Final presentations are due in the week of 4/26 and 4/28.

Online Final Exam (25%)  
13<sup>th</sup> May 2021 (2pm-5pm)

There are no makeup exams. If you miss an exam, your missing grade will be replaced by an average of your other grades, adjusted for why you missed the exam or quiz. Acceptable reasons include death in the family, critical illness validated with a note from the appropriate dean, or a University sponsored trip. Questions about grading of any assignment or exam must be addressed within two weeks of its return. Questions must be presented in writing, and the entire assignment or exam will be regarded, which means you might end up with a lower score than you started with.

I will make every attempt to respond to class-related emails within 24 hours. This policy does not apply to weekend.

**Course Overview (blue highlight = problem set due; orange=final project presentations)**

Week of	Monday (3:30-4:45pm)	Wednesday (3:30-4:45pm)	Sections	Movie, Documentary evening every Fri at 3pm
02/1/2021	Introduction to Development	Role of the state in developing countries: Public sector markets	<b>Detailed discussion on logistics – expectations</b>	
02/8/2021	Causality (Method: Experiments and Diff-in-Diff)	Measures of poverty	<b>Discussion:</b> Econ of the Public Sector Ch 4 Q. 1, 2, 3	
02/15/2021	<b>Economic lives of the poor</b>	Scheduled Break No Class	<b>Problem set recap:</b> Causality experiments	
02/22/2021	Growth theory and development: Solow Growth Model	Growth theory through the lens of development (method: IV)	<b>Discussion:</b> Understanding Purchasing Power Parity and Data exercise	<b>Movie, documentary</b>

03/1/2021	Growth theory through the lens of development (method: IV)	Growth theory through the lens of development (method: IV)	<b>Problem Set:</b> Poverty	
03/8/2021	Information frictions and externalities: Application to the health sector	COVID-19: A discussion and presentations by students	<b>Problem set recap:</b> Growth	
03/15/2021	Information frictions and externalities: Application to the health sector	Information frictions and externalities: Application to the health sector + <b>Review for Midterm</b>	<b>Review for midterm</b>	
03/22/2021	MIDTERM	<b>PROJECT MEETING</b>	<b>Discussion:</b> Revision of different empirical methods: RCT, DID and IV; The problem of selection	Movie, documentary
03/29/2021	Scheduled Break No Class	Information frictions: Application to the credit market	<b>Midterm recap</b>	
04/5/2021	Information frictions: Application to the credit market	Information frictions: Application to the credit market + Inequality: measurement of inequality and application to the land market	<b>Problem set recap:</b> Health	
04/12/2021	Gender inequality: theoretical ideas and empirical evidence – I	Gender inequality: theoretical ideas and empirical evidence – I	<b>Discussion:</b> MFI Experiments (Recap)	
04/19/2021	Gender inequality: theoretical ideas and empirical evidence – II	Gender inequality: theoretical ideas and empirical evidence – II	<b>Problem set recap:</b> Inequality: land	
04/26/2021	PROJECT PRESENTATIONS	PROJECT PRESENTATIONS	<b>Problem set recap:</b> Inequality: Gender	Movie, documentary

05/3/2021	Corruption: definition, measurement, is corruption efficient	Review for final	Review for final	
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### Students with special needs

All students with special needs requiring accommodations should present the appropriate paperwork from the Student Disability Access Center (SDAC). It is the student's responsibility to present this paperwork by 05/3/2021 and follow up with me about the accommodations being offered. Accommodations for test-taking (e.g., extended time) should be arranged *at least two weeks before an exam*. The SDAC is located in the Department of Student Health and can be contacted at 243-5180/5181.

### Course Honor Policy

I trust every student in this course to comply fully with all of the provisions of the UVA Honor System. By enrolling in this course, you have agreed to abide by and uphold the Honor System of the University of Virginia.

### Detailed Course Outline

**All readings required except those marked with \*\*.**

**\*\* = recommended.**

DE=Development Economics. PE = Poor Economics.

Note: Lecture notes and all readings will be made available on Collab during the term. It is the student's own responsibility to manage their printing of any of these documents within any budget for printing they may have. Please be mindful of the environment if you plan to print.

### The concept of development

- Ghatak, Maitreesh. "Measures of Development—Concepts, Causality, and Context." In *Economics, Management and Sustainability*, pp. 3-11. Springer, Singapore, 2018.
  - \*\*Sen, Amartya. "The concept of development." *Handbook of development economics* 1 (1988): 9-26.
  - \*\*DE Chapter 2
  - \*\*Lucas Jr, Robert E. "On the mechanics of economic development." *Journal of monetary economics* 22, no. 1 (1988): 3-42.

### The role of the state

- Chapter 3 and 4 of Stiglitz, Joseph E., and Jay K. Rosengard. *Economics of the public sector: Fourth international student edition*. WW Norton & Company, 2015.
- Finan, Frederico, Benjamin A. Olken, and Rohini Pande. "The personnel economics of the developing state." In *Handbook of Economic Field Experiments*, vol. 2, pp. 467-514. North-Holland, 2017.
  - \*\*Dixit, Avinash. "Incentives and organizations in the public sector: An interpretative review." *Journal of human resources*, no. 4 (2002): 696-727.
  - \*\*Banerjee, Abhijit V. "A theory of misgovernance." *The Quarterly journal of economics* 112, no. 4 (1997): 1289-1332.
  - \*\*Besley, Timothy, and Torsten Persson. "The origins of state capacity: Property rights, taxation, and politics." *American Economic Review* 99, no. 4 (2009): 1218-44.
  - \*\*Besley, Timothy, and Torsten Persson. "State capacity, conflict, and development." *Econometrica* 78, no. 1 (2010): 1-34.

- \*\*Sanchez de la Sierra, Raul. "On the Origin of States: Stationary Bandits and Taxation in Eastern Congo," Journal of Political Economy, Forthcoming.

## Causal inference

- Chapter 1, Randomized Trials, Angrist, Joshua D., and Jörn-Steffen Pischke. Mastering Metrics: The path from cause to effect. Princeton University Press, 2014.
- *Chapter 5 Differences in Differences*, Angrist, Joshua D., and Jörn-Steffen Pischke. Mastering Metrics: The path from cause to effect. Princeton University Press, 2014.

## Poverty

*What is poverty? How do we measure it?*

- DE Ch. 8
  - \*\*Deaton, Angus (2004) Measuring Poverty. Research Program in Development Studies, Princeton University
  - \*\*World development report 1990 : Poverty. World Development Indicators. Washington, DC: World Bank Group.
  - \*\*Haughton, Jonathan, and Shahidur R. Khandker. Handbook on poverty and inequality. World Bank Publications, 2009.
  - \*\*Banerjee, Abhijit V., and Esther Duflo. "What is middle class about the middle classes around the world?." Journal of economic perspectives 22, no. 2 (2008): 3-28.

*Who are the poor? And what is their economic life like?*

- Banerjee, A.V. and Duflo, E. (2007). The Economic Lives of the Poor. The Journal of Economic Perspectives. 21(1):141–167

## Growth

*Solow Model*

- DE Ch. 3 & 4.1-4.3 **OR** N. Gregory Mankiw Macroeconomics 7<sup>th</sup> Edition, 2009 Chapter 7.1 and 7.3

*Growth theory and development*

- Banerjee, Abhijit V., and Esther Duflo. "Growth theory through the lens of development economics." Handbook of economic growth 1 (2005): 473-552
  - \*\*Mankiw, N. Gregory, David Romer, and David N. Weil. "A contribution to the empirics of economic growth." The Quarterly Journal of Economics 107, no. 2 (1992): 407-437
  - \*\*Acemoglu, Daron, Simon Johnson, and James A. Robinson. "The colonial origins of comparative development: An empirical investigation." American Economic Review 91, no. 5 (2001): 1369-1401.
  - \*\*Acemoglu, Daron, Simon Johnson, and James A. Robinson. "Reversal of fortune: Geography and institutions in the making of the modern world income distribution." The Quarterly Journal of Economics 117, no. 4 (2002): 1231-1294.

- \*\* *Chapter 3 Instrumental Variables*, Angrist, Joshua D., and Jörn-Steffen Pischke. *Mastering Metrics: The path from cause to effect*. Princeton University Press, 2014.

## Health

### *Introduction to health; demand and supply of health*

- PE Chapter 3: “Low-Hanging Fruit for Better (Global) Health”.
  - \*\*Banerjee, Abhijit, and Esther Duflo. "Improving health care delivery in India." In Deaton Festschrift Conference, September, <http://economics.mit.edu/files/5172>. 2009
  - \*\*Banerjee, Abhijit V., Esther Duflo, and Rachel Glennerster. "Putting a band-aid on a corpse: incentives for nurses in the Indian public health care system." *Journal of the European Economic Association* 6, no. 2-3 (2008): 487-500
  - \*\* Cohen, Jessica, Pascaline Dupas, and Simone Schaner. "Price subsidies, diagnostic tests, and targeting of malaria treatment: evidence from a randomized controlled trial." *American Economic Review* 105, no. 2 (2015): 609-45
  - \*\* Cohen, Jessica, and Pascaline Dupas. "Free distribution or cost-sharing? Evidence from a randomized malaria prevention experiment." *Quarterly journal of Economics* 125, no. 1 (2010): 1.

### *Externalities*

- Miguel, Edward, and Michael Kremer. “Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities.” *Econometrica* 72, no. 1 (2004): 159–218.

## Credit

### *Credit intro*

- DE Ch 14
- PE Ch 7
  - \*\*Dean Karlan and Jonathan Zinman, "Observing Unobservables: Identifying Information Asymmetries with a Consumer Credit Field Experiment," *Econometrica*, Nov 2009.

### *Microcredit*

- PE Chapter 9: “Reluctant Entrepreneurs”
- Banerjee, Abhijit, Dean Karlan, and Jonathan Zinman. "Six randomized evaluations of microcredit: Introduction and further steps." *American Economic Journal: Applied Economics* 7, no. 1 (2015): 1-21
- Beatriz Armendariz and Jonathan Morduch, "Microfinance: Where do we stand?" in Charles Goodhart, editor, *Financial Development and Economic Growth: Explaining the Links*. Basingstoke, Hampshire, UK: Palgrave Macmillan, 2004.

## Inequality: Land market

### *Inequality*

- DE chapters 6 and 7

### *Property rights and land reform*

- Banerjee, Abhijit (1999), "Land Reform: Prospects and Strategies," *MIT Mimeo*.

- Field, Erica, "Entitled to Work: Urban Property Rights and Labor Supply in Peru," Mimeo, Harvard, 2006.
  - Christopher Woodruff, "Review of de Soto's *The Mystery of Capital*," *Journal of Economic Literature*, December 2001, 1215-1223.
  - \*\*Udry, Christopher and Markus Goldstein. "The Profits of Power: Land Rights and Agricultural Investment in Ghana". *Journal of Political Economy*, 2008, vol. 116.

### **Inequality: Gender, theoretical ideas and empirical evidence**

- Alesina, Alberto, Paola Giuliano, and Nathan Nunn. "On the origins of gender roles: Women and the plough." *The Quarterly Journal of Economics* 128, no. 2 (2013): 469-530.
- Bernhardt, Arielle, Erica Field, Rohini Pande, Natalia Rigol, Simone Schaner, and Charity Troyer-Moore. "Male Social Status and Women's Work." In *AEA Papers and Proceedings*, vol. 108, pp. 363-67. 2018
- Gneezy, Uri, Muriel Niederle, and Aldo Rustichini. "Performance in competitive environments: Gender differences." *The Quarterly Journal of Economics* 118, no. 3 (2003): 1049-1074
- Gneezy, Uri, Kenneth L. Leonard, and John A. List. "Gender differences in competition: Evidence from a matrilineal and a patriarchal society." *Econometrica* 77, no. 5 (2009): 1637-1664
- Beaman, Lori, Esther Duflo, Rohini Pande, and Petia Topalova. "Female leadership raises aspirations and educational attainment for girls: A policy experiment in India." *Science* 335, no. 6068 (2012): 582-586
  - \*\*Greenwood, Jeremy, Ananth Seshadri, and Mehmet Yorukoglu. "Engines of liberation." *The Review of Economic Studies* 72, no. 1 (2005): 109-133
  - \*\*Marianne, Bertrand. "New perspectives on gender." In *Handbook of labor economics*, vol. 4, pp. 1543-1590. Elsevier, 2011
  - \*\*Bursztyn, Leonardo, Thomas Fujiwara, and Amanda Pallais. "Acting Wife': Marriage Market Incentives and Labor Market Investments." *American Economic Review* 107, no. 11 (2017): 3288-3319.
  - \*\*Kleven, Henrik, Camille Landais, and Jakob Egholt Sogaard. *Children and gender inequality: Evidence from Denmark*. No. w24219. National Bureau of Economic Research, 2018
  - \*\*Coate, Stephen, and Glenn C. Loury. "Will affirmative-action policies eliminate negative stereotypes?." *The American Economic Review* (1993): 1220-1240.

### **EXTRA READING (If interested in the topic)**

- \*\*Ponthieux, Sophie, and Dominique Meurs. "Gender inequality." In *Handbook of income distribution*, vol. 2, pp. 981-1146. Elsevier, 2015.
- \*\*Chiappori, Pierre-André, and Costas Meghir. "Intrahousehold inequality." In *Handbook of income distribution*, vol. 2, pp. 1369-1418. Elsevier, 2015
- \*\*Olivetti, Claudia, and Barbara Petrongolo. "The evolution of gender gaps in industrialized countries." *Annual review of Economics* 8 (2016): 405-434.
- \*\*Duflo, Esther. "Women empowerment and economic development." *Journal of Economic literature* 50, no. 4 (2012): 1051-79
- \*\*Fang, Hanming, and Andrea Moro. "Theories of statistical discrimination and affirmative action: A survey." In *Handbook of social economics*, vol. 1, pp. 133-200. North-Holland, 2011.

- \*\*McIntyre, Matthew H., and Carolyn Pope Edwards. "The early development of gender differences." *Annual review of anthropology* 38 (2009): 83-97
- \*\*Bertrand, Marianne. "Career, family, and the well-being of college-educated women." *American Economic Review* 103, no. 3 (2013): 244-50.
- \*\*Becker, Gary Stanley, and Gary S. Becker. *A Treatise on the Family*. Harvard university press, 2009
- \*\*Greenwood, Jeremy, Nezih Guner, and Guillaume Vandenbroucke. "Family economics writ large." *Journal of Economic Literature* 55, no. 4 (2017): 1346-1434.
- \*\*Dhar, Diva, Tarun Jain, and Seema Jayachandran. *Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India*. No. w25331. National Bureau of Economic Research, 2018.
- \*\*Field, Erica, Seema Jayachandran, Rohini Pande, and Natalia Rigol. "Friendship at work: Can peer effects catalyze female entrepreneurship?." *American Economic Journal: Economic Policy* 8, no. 2 (2016): 125-53.
- \*\*Dean, Joshua T., and Seema Jayachandran. "Changing Family Attitudes to Promote Female Employment." In *AEA Papers and Proceedings*, vol. 109, pp. 138-42. 2019.
- \*\*Bernhardt, Arielle, Erica Field, Rohini Pande, and Natalia Rigol. *Household matters: Revisiting the returns to capital among female micro-entrepreneurs*. No. w23358. National Bureau of Economic Research, 2017
- \*\*Bertrand, Marianne. "The glass ceiling." *Becker Friedman Institute for Research in Economics Working Paper* 2018-38 (2017).
- \*\*Udry, Christopher. "Gender, agricultural production, and the theory of the household." *Journal of political Economy* 104, no. 5 (1996): 1010-1046.
- \*\*Kleven, Henrik, and Camille Landais. "Gender inequality and economic development: fertility, education and norms." *Economica* 84, no. 334 (2017): 180-209.
- \*\*Kleven, Henrik, Camille Landais, Johanna Posch, Andreas Steinhauer, and Josef Zweimüller. "Child penalties across countries: Evidence and explanations." In *AEA Papers and Proceedings*, vol. 109, pp. 122-26. 2019
- \*\*Qian, Nancy. "Missing women and the price of tea in China: The effect of sex-specific earnings on sex imbalance." *The Quarterly Journal of Economics* 123, no. 3 (2008): 1251-1285
- \*\*Chattopadhyay, Raghavendra, and Esther Duflo. "Women as policy makers: Evidence from a randomized policy experiment in India." *Econometrica* 72, no. 5 (2004): 1409-1443.

## Corruption and e-governance

### *Corruption*

- Olken, Benjamin and Rohini Pande (2012). "Corruption in Developing Countries", *Annual Review of Economics*.
  - \*\*Ben Olken, "Monitoring Corruption: Evidence from a Field Experiment in Indonesia," *Journal of Political Economy* 115(2), 200-249, April 2007.
  - \*\*Wade, Robert (1982) "The system of administrative and political corruption: Canal irrigation in South India." *Journal of Development Studies*, 18(3), 287-328.
  - \*\*Bardhan, Pranab. "Corruption and development: a review of issues." *Journal of economic literature* 35, no. 3 (1997): 1320-1346.
  - \*\*Raymond Fisman and Edward Miguel, "Cultures of Corruption: Evidence from Diplomatic Parking Tickets," *BREAD Working Paper* #122, May 2006.
  - \*\*Niehaus, Paul, and Sandip Sukhtankar. "Corruption dynamics: The golden goose effect." *American Economic Journal: Economic Policy* 5, no. 4 (2013): 230-69

- \*\*Sukhtankar, Sandip, and Milan Vaishnav. "Corruption in India: Bridging research evidence and policy options." In India Policy Forum, vol. 11, no. 1, pp. 193-276. National Council of Applied Economic Research, 2015.
- \*\*Sukhtankar, Sandip. "The impact of corruption on consumer markets: Evidence from the allocation of second-generation wireless spectrum in India." The Journal of Law and Economics 58, no. 1 (2015): 75-109.
- \*\*Niehaus, Paul, and Sandip Sukhtankar. "The marginal rate of corruption in public programs: Evidence from India." Journal of public Economics 104 (2013): 52-64

*E-governance and accountability mechanisms*

- Muralidharan, Karthik, Paul Niehaus, and Sandip Sukhtankar. "Building state capacity: Evidence from biometric smartcards in India." American Economic Review 106, no. 10 (2016): 2895-2929.
  - \*\*Banerjee, Abhijit, Esther Duflo, Clement Imbert, Santhosh Mathew, and Rohini Pande. "Can e-governance reduce capture of public programs? Experimental evidence from a financial reform of India's employment guarantee." Accessed February 15 (2014): 2017.
  - \*\*Banerjee, Abhijit, Rema Hanna, Jordan Kyle, Benjamin A. Olken, and Sudarno Sumarto. "Tangible information and citizen empowerment: Identification cards and food subsidy programs in Indonesia." Journal of Political Economy 126, no. 2 (2018): 451-491.
  - \*\*Avis, Eric, Claudio Ferraz, and Frederico Finan. "Do government audits reduce corruption? Estimating the impacts of exposing corrupt politicians." Journal of Political Economy 126, no. 5 (2018): 1912-1964.
  - \*\*Dhaliwal, Iqbal, and Rema Hanna. "The devil is in the details: The successes and limitations of bureaucratic reform in India." Journal of Development Economics 124 (2017): 1-21