

# Daniel Björkegren

E-mail: [dan@bjorkegren.com](mailto:dan@bjorkegren.com)

Web: <http://dan.bjorkegren.com>

Address: Department of Economics  
Box B  
Brown University  
Providence, RI, 02912

## Academic Employment

2014- Assistant Professor of Economics, Brown University  
2019-2020 Visiting Researcher, Microsoft Research New England  
2017-2018 W. Glenn Campbell and Rita Ricardo-Campbell National Fellow,  
Stanford University

## Education

2014	Ph.D. Economics	Harvard University <i>Advisors: Michael Kremer, Greg Lewis, and Ariel Pakes</i>
2011	M.A. Economics	Stanford University
2009	M. Public Policy	Harvard Kennedy School
2005	B.S. Physics	University of Washington

## Research

### Economics Publications

**The Adoption of Network Goods:** Evidence from the Spread of Mobile Phones in Rwanda. Review of Economic Studies, 2019.

**Behavior Revealed in Mobile Phone Usage Predicts Credit Repayment.**  
(with Darrell Grissen) World Bank Economic Review, 2020.

**Competition in Network Industries:** Evidence from the Rwandan Mobile Phone Network. RAND Journal of Economics, 2022.

**Network Adoption Subsidies:** A Digital Evaluation of a Rural Mobile Phone Program in Rwanda (with Burak Ceyhun Karaca) Journal of Development Economics, 2021.

### Computer Science Publications (Peer Reviewed Conference Articles)

**Assessing Bias in Smartphone Mobility Estimates in Low Income Countries.** Sveta Milusheva, Daniel Björkegren, and Leonardo Viotti. ACM Conference on Computing and Sustainable Societies (COMPASS), 2021.

**Balancing Competing Objectives with Noisy Data:** Score-Based Classifiers for Welfare-Aware Machine Learning. Esther Rolf, Max Simchowitz, Sarah Dean, Lydia Liu, Daniel Björkegren, Moritz Hardt, and Joshua Blumenstock. International Conference on Machine Learning (ICML), 2020.

**Workshop: Balancing Competing Objectives for Welfare-Aware Machine Learning with Imperfect Data.** Esther Rolf, Max Simchowitz, Sarah Dean, Lydia Liu, Daniel

Björkegren, Moritz Hardt, and Joshua Blumenstock. Neural Information Processing Systems (NeurIPS) Joint Workshop on AI for Social Good, 2019. *Best Paper Award*

**Measuring Informal Work with Digital Traces: Mobile Payphone Operators in Rwanda.** Daniel Björkegren. International Conference on Information and Communication Technologies and Development (ICTD), 2020.

### Working Papers

**(Machine) Learning what Policies Value** (with Samsun Knight and Joshua Blumenstock). *Revision requested, Review of Economic Studies*  
Conference version published at ACM EAAMO, 2021 (nonarchival).

**Manipulation Proof Machine Learning** (with Joshua Blumenstock and Samsun Knight)

**Causal Inference from Hypothetical Evaluations** (with B. Douglas Bernheim, Jeffrey Naecker, and Michael Pollmann)

**Instant Loans Can Lift Subjective Well-Being: A Randomized Evaluation of Digital Credit in Nigeria** (with Joshua Blumenstock, Jacqueline Mauro, and Suraj Nair)

**Nonparametric Causal Estimators for Multivariate Missing Data: An Application to Estimate Treatment Effects from Digital Trace Data** (with Jacqueline Mauro and Joshua Blumenstock)

**Nostalgic Demand**

### Other Writing

**To Regulate Network-Based Platforms, Look at Their Data** (with Chiara Farronato) Harvard Business Review, 2021. *Blog post*

**The Potential of Digital Credit to Bank the Poor.** (with Darrell Grissen) American Economic Association Papers and Proceedings, 2018.

### Research in Progress

**Welfare Sensitive Credit Scoring** (with Joshua Blumenstock)

**Efficiency of Informal Transit Networks** (with Alice Duhaut, Geetika Nagpal, and Nick Tsivanidis)

**Does Public Transit Crowd Out Informal Transit? Evidence from Lagos** (with Alice Duhaut, Geetika Nagpal, and Nick Tsivanidis)

**How Do Individuals Learn: Evidence from Rwanda** (with Aislinn Bohren, Ashesh Rambachan, and Patrick Vu)

## Presentations (including scheduled)

- 2023 Cardozo Law Review Symposium:  
Automating Bias
- 2022 Next Generation of Antitrust, Data Privacy,  
and Data Protection Scholars Conference  
(NYU/American Bar Association)  
Washington University St. Louis  
NYU  
Columbia University (Development)  
World Bank/CEGA MeasureDev  
Harvard/MIT (Development)  
Bravo Center Workshop on Economics of  
Algorithms, Brown University
- 2021 AEA Annual Meeting  
Brown University Data Science 'Fair  
February' (Keynote)  
NBER Industrial Organization  
NBER Digitization (Discussant)  
UC Santa Barbara  
Private Sector Development Research  
Network: Firm Data Workshop  
MIT (Applied Micro)  
UC Riverside
- 2020 AEA Annual Meeting  
World Bank  
Princeton University (IO)  
Bill and Melinda Gates Foundation  
EconTwitter Econ/Finance Conference  
Microsoft Research New England  
University of Oxford (Econometrics)  
BREAD preconference  
BREAD  
Berlin Center for Consumer Policies: 'The  
Future of AI for Policymaking'
- 2019 NBER Industrial Organization  
RAND Corporation  
International Industrial Organization  
Conference  
Boston College  
NSF Network Science in Economics  
Microsoft Research New England  
Federal Trade Commission (FTC)  
Workshop on Firms in Emerging Economies  
(Jinan University, China)
- 2018 AEA Annual Meeting  
University of Washington  
Stanford University  
UC Berkeley  
Artificial Intelligence for Economic  
Development (CEGA/World Bank)  
Federal Communications Commission (FCC)
- 2017 Dartmouth Winter IO Conference
- ETH Zürich Workshop on AI+Economics  
(Keynote)  
Northeastern University  
Columbia University (SIPA)  
NEUDC  
University of Chicago Booth  
George Washington University (Computer  
Science)
- World Bank: World Development Report  
Data Infrastructure (Panelist)  
ZEW ICT Conference  
Temple University  
MIT Conference on Digital Experimentation  
Southern Economic Association Annual  
Meeting  
NeurIPS Workshop on Human and Machine  
Decisions (Panelist)
- ETH Zürich  
Microsoft Research NYC  
Penn State (Development)  
NBER Artificial Intelligence (Discussant)  
NeurIPS Machine Learning for Economic  
Policy (Panelist)
- Canceled/Postponed due to COVID-19:  
Chinese University of Hong Kong  
Hong Kong Baptist University*
- Joint Statistical Meetings (JSM)  
Yale University  
NBER Artificial Intelligence  
Imperial College Business School  
(Finance/Economics)  
MIT Conference on Digital Experimentation  
Tufts University  
Harvard (Computer Science: EconCS)  
World Bank Infra4Dev (Toulouse)
- PacDev  
NBER Digitization (Winter)  
NBER Digitization (Summer poster)  
NBER Development preconference  
NBER Development  
World Bank ABCA
- NetMob

	J-PAL Conference Dominican Republic Penn State Conference on Data Driven Development in Africa	UC San Diego Berkeley-Stanford IO Fest University College London
2016	AEA Annual Meeting Microsoft Research Economics Conference	NBER Digitization World Bank ABCDE
2015	Georgetown University of Houston NEUDC NBER Development NBER Industrial Organization NetMob	Stockholm School of Economics Stockholm University Summer Institute in Competitive Strategy (UC Berkeley) UC Davis (ARE) Yale University
2014	Boston University Brown University Michigan State University	Northwestern (Kellogg MEDS) Stanford GSB University of Cambridge (INET)
2013	NEUDC	
2012	Nagoya University Conference on Risk, Food and Trade	

## Honors

2013-2014	Oppenheimer Graduate Fellowship Fund	Harvard University
2011-2013	Graduate Fellowship	Harvard Economics
2010	George Shultz Fellowship	Stanford Institute for Economic Policy Research
2009	Graduate Fellowship	Stanford Economics
2003	Jerre Noe Scholarship	University of Washington Computer Science
2002	Freshman Medal	University of Washington

## Teaching

### Brown University

2014-	Big Data (Undergraduate)
	Causal Inference (Undergraduate)
	Development Economics (Ph.D.)

### Teach for America

2005-2007	High School Math and Science	Weslaco, Texas
-----------	------------------------------	----------------

### Minicourses and Workshops

2022	University of Chicago Machine Learning in Economics	Summer Institute
2021	NBER Digitization PhD Tutorial: Digitization and Developing Societies	
2018	UC San Diego: Machine Learning	

## Professional Activities

Affiliations	Bureau for Research and Economic Analysis of Development (BREAD)
	Brown University Population Studies and Training Center
	Brown University Data Science Initiative

Jameel Poverty Action Lab (J-PAL)  
Stanford Golub Capital Social Impact Lab  
Toulouse Financial Inclusion through Interoperability Initiative

Reviewer American Economic Review, Demography, Development Engineering,  
Econometrica, Harvard University Press, Journal of Development Economics,  
Journal of Political Economy, Marketing Science, National Science Foundation,  
Nature Human Behavior, Quarterly Journal of Economics, RAND Journal of  
Economics, Review of Economics and Statistics, Science, USAID, World  
Development, and others

## Conference

2022 Bravo Center Workshop on Economics of Algorithms, Co-organizer  
2022 ACM COMPASS Program Committee  
2021 ACM COMPASS Track Chair: Development, Economics, and Policy  
2021 ACM EC Program Committee  
2017 ACM CSCW Reviewer  
2016 ACM DEV Program Committee

## Service

2022- Scientific Steering Committee, Retail Finance Distribution Research Initiative,  
University of Ghana

## Grants

2022 *“Efficiency of Informal Transit Networks” with Nick Tsivanidis, Alice Duhaut, and Geetika Nagpal:*  
Weiss Fund, \$62,530

2021 *“Welfare Scoring for Digital Credit” with Joshua Blumenstock:*  
Innovations for Poverty Action, \$144,711

*“Efficiency of Informal Transit Networks” with Nick Tsivanidis, Alice Duhaut, and Geetika Nagpal:*  
World Bank, \$198,000  
CEPR STEG, £98,968  
J-PAL King Climate Action Initiative, \$177,015  
Brown Seed Funding, \$50,000

2020 NBER Social Learning Initiative, \$30,972

*“Efficiency of Informal Transit Networks” with Nick Tsivanidis, Alice Duhaut, and Geetika Nagpal:*  
International Growth Centre, £107,279

2019 *“Efficiency of Informal Transit Networks” with Nick Tsivanidis, Alice Duhaut, and Geetika Nagpal:*  
World Bank, \$75,000

*“Impact Credit Scoring for Women’s Empowerment” with Joshua Blumenstock:*  
Bill and Melinda Gates Foundation, \$49,892

*“Welfare Sensitive Machine Learning” with Joshua Blumenstock and Moritz Hardt:*

Amazon.com, \$20,000 compute credits

2018 *“Digital Credit Scoring” with Joshua Blumenstock:*  
Bill and Melinda Gates Foundation, \$420,000  
Brown Seed Funding, \$49,954

2017 *“Competition in Network Industries”:*  
NET Institute, \$3,000

2015 *“Precision Agriculture for Development” with Michael Kremer, Shawn Cole, and Heiner Baumann:*  
Unorthodox Philanthropy: \$1,193,500  
Anonymous Donor: \$2,241,100

2010 *“Big Data for Development”:*  
Stanford Institute for Economic Policy Research, George Shultz Fellowship: \$3,000

## **Student Advising**

**PhD** (with initial placement; \*: primary advisor)

2022 Samsun Knight\*, Northeastern Postdoc

2020 Sagar Wadhwa, Amazon

2018 Will Violette, Federal Trade Commission

2017 Margarita Gafaro Gonzalez, Banco de la Republica Colombia

Sveta Milusheva, World Bank Research Group

Aurora Ramirez Alvarez, Colegio de México

2016 Morgan Hardy, NYU Abu Dhabi

## **Undergraduate**

2022 Jolie Wei

## **External Reviewer**

2022 Vatsala Shreeti, reviewer for Toulouse School of Economics

## **Other Employment**

2016-2020 Precision Agriculture for Development Co-founder and Board Member

2008-2009 Abdul Latif Jameel Poverty Action Lab (J-PAL) Consultant

2000-2001 Microsoft Mobile Device Division High School Intern

Coded the photo app for Microsoft’s first smartphone.

**Language** English, Swedish

Updated November 2022