Lending to the poor

Small firms in developing countries have untapped opportunities.
(De Mel et al. 2008: >55% annual return)

Current approaches
• Credit bureaus, banks
• Microfinance

...have had limited success
• 2b people lack back accounts (World Bank)
• Mixed/limited impacts (Banerjee et al 2014, etc)

New Model:
Over 6b mobile phones in developing countries (ITU 2017)
A New Model: Digital Credit

1. Mobile Phones

2. Mobile Money
   Transfer Money. Savings. Credit.

3. Repayment
   Credit bureau and mobile money usage (sparse)
   This project: nuances in mobile phone usage
   (Björkegren 2010, Björkegren and Grissen 2015 and 2018)
Phone usage reveals behavior

• Do you keep your balance above a minimum threshold?
• Do people return your calls?
• What weekly/monthly/yearly pattern does your consumption follow?

Usage, mobility, top up, depletion, social network, ...
Credit Scoring the Unbanked

Extract 5,500 indicators describing nuances in phone usage, predict repayment with a machine learning model.

Behavior revealed in mobile phone usage predicts loan repayment (Björkegren 2010, Björkegren and Grissen 2015 and 2018)
Digital credit: an emerging revolution?

- Over 68 products (Reynolds et al 2017)
- Over 11m borrowers (Francis Blumenstock Robinson 2017)
- In Kenya, more have loans with digital credit than banks, or microfinance (FSD 2016)

Implementation
- Access to data + interface
- Stability of models over time
- Manipulation

Digital financial services
- What is feasible? What is profitable? What best meets the needs of the poor?
Digitization = new opportunities for developing societies

Daniel Björkegren
Assistant Professor of Economics, Brown University

dan@bjorkegren.com
http://dan.bjorkegren.com