Research on Tap: Global Development Policy

February 12, 2018
Labor Mobility and Human Development

Samuel Bazzi

Assistant Professor
Economics, CAS
Female Labor Migration and Poverty Reduction

400 Study Villages

Control Group
(100 villages)

Group 1
Report Card + Comic
(101 villages)

Group 2
Report Card only
(101 villages)

Group 3
Comic only
(98 villages)

Information Sharing Service: RCT
Skills and Livelihoods

Kehinde Ajayi
Assistant Professor
Economics, CAS
Beliefs about HIV in the Age of Mass Treatment: Evidence from Rural South Africa

 Jacob Bor

Assistant Professor
Global Health and Epidemiology, SPH
HIV treatment is highly effective prevention

- HPTN-052 trial: 96% reduction in risk
- PARTNERS cohort: 0 infections in 58,000 sex acts

The primary rationale for “test-and-treat” is prevention.

Clinical v. prevention benefits of ART in patients with CD4 > 500.
Models predict “test-and-treat” could end AIDS

Granich et al 2009
But only if people test for HIV and start ART early in disease progression

...our research shows low demand for early ART

Bor, et al. Failure to initiate HIV treatment at high CD4 counts. 
*TMIH, 2018.*
A major knowledge gap

We surveyed 425 young adults in rural South Africa, Fall 2017

Objective v. perceived risk of transmitting HIV while on ART and virally suppressed

![Bar chart showing objective and perceived risk of transmitting HIV while on ART and virally suppressed: Objective Risk: 1%, Perceived Risk: 75%]
People underestimate the prevention benefits of ART

<table>
<thead>
<tr>
<th></th>
<th>Objective</th>
<th>Perceived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condoms</td>
<td>77%</td>
<td>70%</td>
</tr>
<tr>
<td>ART</td>
<td>95%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Objective v. perceived efficacy of condoms and ART in reducing HIV transmission risk
Mahesh Karra

Assistant Professor

Global Development Policy, Pardee
My Work

How I classify my work:
• International health and development economics

My research focus:
• Relationships between population, health (maternal and child health), and economic development in low- and middle-income countries

My research approach:
• Micro (individual level) and macro (population level)
• Primary data approaches (field experiments, intervention research)
• Secondary data analysis and modeling (simulation)
• Quantitative and qualitative methods
• Economics, statistics, applied demography
Current Work

Non-Fieldwork Projects: distance and measurement, women’s autonomy and empowerment, Demographic Dividend modeling

Boston University Office of the Vice President and Associate Provost for Research
Can Engineering Address the Global Development Impasse?

Muhammad H. Zaman, PhD
Biomedical Engineering & International Health
Howard Hughes Medical Institute
Boston University
zaman@bu.edu
Twitter: @mhzaman
PharmaChk: Strengthening Health Systems
Mathematical Modeling of Health Systems

[Diagram showing a scatter plot with various points labeled with city names such as Ma'areb, Sana'a Govt., Sana'a city, Aden, Ibb, Lahj, Damar, Socatra, Say'on, AL_Mahrah, Sa'adah, Taiz, Hajah, AL_jawf, AL_Mahweet, and AL_Hodydah. The x-axis represents Health System capacity, Morbidity, Nutrition, Food security, WASH, and Social Determinants, while the y-axis represents Hazards and Impact on exposed population.]
Bruce Larson*

*Research Professor
Global Health, SPH

*Ph.D., Agricultural Economics
What do we (and I) do in the Department of Global Health?

**Health services research** → multidisciplinary research, studies how social factors, financing, organizations, technologies, and behavior affect access to health care, quality and cost, and in the end health and well-being (see www.ahrq.gov)

**Implementation science** → also multidisciplinary research, studies how to increase uptake of interventions already proven effective into routine practice (see www.gacd.org)

**HIV treatment and income**
(Kenya, KES per month)

- Labor Income (index women)
- Labor Income (ref women)

**Where, with whom, and with whose $$s?**
e.g., Kenya, South Africa, Zambia, Uganda, Botswana
e.g., KEMRI, Wits, PATH, Walter Reed
e.g., NIH, PEPFAR, BMGF, CDC, USAID

**How do we do it?**
Randomized – individual (SLATE)
Randomized – cluster (EMMA)
Quasi-experimental (ISHED, CBCO)
Costs of programs (VMMC, PIMA POC)
Costs of chronic patient care (HIV cohorts)
Rachael Garrett

Assistant Professor

Earth & Environment, CAS
1. Impact of trade & conservation policies on land change

Growing demand for meat in emerging economies

Governance responses: 2006-2017

Cargill - Eating up the Amazon

Cargill announces zero deforestation policy across entire global supply chain

BRAZIL'S DEFORESTATION RATES ARE ON THE RISE AGAIN

Major global companies commit to halting destruction of Brazilian Cerrado
2. Opportunities for scaling up sustainable agriculture

Low income land uses occupy a majority of the Amazon

Low-income ranching on degraded pastures

High-value fruit & veggies

Improved ranching
Julie Klinger, PhD

Assistant Professor
Frederick S. Pardee School of Global Studies

Associate Director
Land Use and Livelihoods Initiative
Global Development Policy Center
Anthony Janetos

Frederick S. Pardee Professor of Earth and Environment and Director, The Pardee Center for the Study of the Longer-Range Future
Assessing the Impacts of Multiple Breadbasket Failures - Anthony Janetos and John Patrick Connors

Risk = Magnitude of Impact X Probability of Occurrence

Focus on risks that are globally important, recognizing that underlying phenomena may not be global, and global risks can be a consequence of regionally significant phenomena.

Objectives:
- Evaluate the likelihood of occurrence of such events
- Assess impacts of breadbasket failures in food and energy systems
- Quantify risks associated with failure of multiple breadbaskets

GCAM is an integrated assessment model that integrates economic, energy, land use, water, and physical Earth systems models.

We use GCAM to model changes in agricultural production, prices, land use, and emissions from 1990-2100.

We ran 60 scenarios of shocks to agricultural production given both RCP 4.5 policy targets and no climate policy targets (120 scenarios total).

Larger shocks have greater impacts on land change and emissions.

The response of the shock is dependent upon the the crop, which affects the suitable areas for re-allocation.

Emissions are largely a consequence of how much forest has been reallocated to agriculture.

Bioenergy crops dominate scenarios without explicit carbon policy

But forests expand dramatically when carbon is priced explicitly
Henrik Selin & Adil Najam
Pardee School of Global Studies, Boston University
Understanding Insecurity

Civil Strife

Human Security

War

Institutional Failure

Violence

Social Disruption
Does
“Corporate Social Responsibility” Have an Impact in LMICs?

Warren Kaplan
PhD, JD, MPH
Clinical Assistant Professor
Global Health, BUSPH

Boston University Office of the Vice President and Associate Provost for Research
Systematic review of CRS program evaluations

**Period:** 2000-2018

**Language:** English

**Search engines:** science and social science literature with focus on business

**Type of CSR programs:** impact on education, health & safety, nutrition and poverty reduction

Documents screened 1,132

Initial review 129

Final review: 41

Included: 10

**Countries:** Sri Lanka, UK (2), Equatorial Guinea (2), Nigeria, Bolivia, Dominican Republic, Mexico

**Industries:** Extractive (6), Construction, Sports (2), Education,

**Boston University** Office of the Vice President and Associate Provost for Research
Experimental Designs: not even a pre-post with control?

<table>
<thead>
<tr>
<th>Study design</th>
<th>RCT</th>
<th>ITS</th>
<th>Panel</th>
<th>Pre-/Post</th>
<th>Post only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Control</td>
<td>No control</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

Assessment of quality of evidence of the 10 studies included using GRADE

<table>
<thead>
<tr>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
<th>Very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>True effect lies close to estimate</td>
<td>True effect lies close to estimate but possibility it is substantially different</td>
<td>True effect may be substantially different from estimate</td>
<td>Estimate of effect is very uncertain</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

Boston University Office of the Vice President and Associate Provost for Research
Min Ye

Associate Professor
International Relations
Pardee School of Global Studies

Research on Tap: China’s Outbound Globalization

Over 62% of the world’s population
佔全球人口超過62%

Over 34% of the world’s merchandise trade
佔全球貨物貿易超過34%

Around 31% of the world’s GDP
佔全球生產總值約31%

This preliminary map is based on the proposed geo-economic cooperation as described in the Vision and Actions on Jointly Building the Silk Road Economic Belt and 21st Century Maritime Silk Road document. Actual routes may differ and may also extend to encompass other territories as the project develops.

Boston University Office of the Vice President and Associate Provost for Research
Common Perceptions of BRI:
- Driven by external ambition—global domination
- Driven by individual leadership’s spur—durability
- Driven by security and politics—waste of money

Unpacking:
- Who were the domestic actors behind its creation?
  - Agencies & interests: foreign affairs; economic bureaucrats; grand strategists
- How is the Chinese state governing the initiative?
  - Autocratic promotion; economic technocrats
- What are the dynamics of its implementation?
  - Domestic regional economic planning; external business expansion

Importance to:
- evaluate whether it is a sustainable national strategy
- anticipate its effects both domestically and abroad
- come up with feasible responses to it.

**Boston University** Office of the Vice President and Associate Provost for Research
Suchi Gopal

Josh Pitts, Jamie Baldwin, Kevin Gallagher & Zhongshu Li*

Mapping Global Patterns of Energy Investments

Earth & Environment, CAS
Global Development Policy Center
The goal of our project is to build a unique database combining four sources of foreign direct investment by source and destination country. The database tracks annual foreign investments flows in general, relevant features such as industry breakdown, type and amount of investment, as well as spatial location. We are particularly interested in capturing flows in the energy sector and subsectors.
Research Questions in the Context of BRI

1. What are the current geographies and demographics of key Asian BRI countries? How will they be impacted by BRI?

2. How are international and regional trade impacted by BRI? How is the current trade with China? How will it change due to BRI?

3. What are the environmental impacts of BRI in regions? What is the existing biodiversity status in a region? Assess food and water security.

4. What is the level of investment capital for energy infrastructure in various regions? What is the current energy status of the region? How will BRI drive investments in renewables or biofuels?

5. What are the current geographies and demographics of key Asian BRI countries? How will they be impacted by BRI?
Kevin P. Gallagher

Professor
Frederick S. Pardee School for Global Studies;
Director
Global Development Policy Center
Global Economic Governance Initiative

**Mission**—multidisciplinary research that examines the extent to which international economic institutions foster financial stability, human development, and environmental sustainability.

- **Financial Stability:**
  - Financial regulations and trade/investments
  - Strengthening the global safety net
  - Central Banks and stability

- **Development Finance**
  - Development banks in the Amazon
  - Financing green energy
  - Chinese Overseas Development Finance

- **International Trade:**
  - Trade Rules and access to medicines
  - The Trading System and Climate Policy
The Belt Road and Beyond: China and global development