DOING DEVELOPMENT DIFFERENTLY

Daniel Rogger | Maria Jones, DIME, WBG

MARCH 2023
DO DEVELOPMENT DIFFERENTLY

USING TRIAL-AND-ADOPT TO CHANGE THE WORLD
scale is not determined by size or budget but by the change it brings in
1. Wire in evidence in design
2. Entrench trial-and-adopt during implementation
3. Build capacity to improve (1) and (2)

Design workshops:

- Training and facilitated sessions to embed evidence in project design
- Economies of scale in portfolio preparation
- Healthy competition and cross-team learning

Bottom line: Change development culture
(2) Trial-and-adopt approach to project design

Test alternative approaches to project delivery side-by-side to identify what works and make smarter choices.
WHERE CAN THIS HAPPEN?

EVERYWHERE IN ALL SECTORS
<table>
<thead>
<tr>
<th></th>
<th>Status Quo</th>
<th>Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learn from past mistakes</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>2. Rank interventions by effectiveness</td>
<td>✗</td>
<td>✓</td>
</tr>
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<tr>
<td>3. Trial and adopt to maximize impact</td>
<td>✗</td>
<td>✓</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Return on investment</td>
<td>X</td>
<td>2X</td>
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</tbody>
</table>

Do we want to remain in a low-return equilibrium?
**Problem:** Reducce poverty

**Trial:** Transfer cash and asset to poor households

**Result:** Cash and asset transfers are highly cost-effective and have persistent effects years after intervention

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**Example 1: Cash transfers reduce poverty**

<table>
<thead>
<tr>
<th>UCT studies</th>
<th>Consumption Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carneiro et al. (2021)</td>
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<tr>
<td>+ 30 other studies</td>
<td>+</td>
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</table>
Cont. EXAMPLE 1: Community-driven development does not

<table>
<thead>
<tr>
<th>Problem: reduce poverty</th>
</tr>
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<tbody>
<tr>
<td><strong>Trial</strong>: Transfer resources to communities to build infrastructure</td>
</tr>
<tr>
<td><strong>Result</strong>: Across 8 randomized control studies CDD has zero impact on poverty reduction</td>
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<tr>
<td>Indonesia KDP</td>
<td>✗</td>
</tr>
<tr>
<td>Philippines KALAHI-CIDSS</td>
<td>✗</td>
</tr>
<tr>
<td>Sierra Leone Go-Bifo</td>
<td>✗</td>
</tr>
<tr>
<td>Senegal PNIR</td>
<td>✗</td>
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<tr>
<td>Andra Pradesh India DPIP</td>
<td>✗</td>
</tr>
<tr>
<td>Liberia CDRP</td>
<td>✗</td>
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<tr>
<td>Afghanistan NSP</td>
<td>✗</td>
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<tr>
<td>China SWP</td>
<td>✗</td>
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<tr>
<td>DRC CDD</td>
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Example 2: Rank Interventions by cost-effectiveness

- **Problem:** 830 women die every day during pregnancy and childbirth

- **Ideas:** incentivize the performance of health facilities in Cameroon, Nigeria, Rwanda, Zambia, and Zimbabwe

- **Trial:** different incentive schemes:
  1. Performance–based incentives
  2. Direct facility financing
  3. Financial incentives to mothers

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<tr>
<th>Effectiveness</th>
<th>Cost</th>
<th>Coverage</th>
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<tbody>
<tr>
<td>✓</td>
<td>1</td>
<td>X</td>
</tr>
<tr>
<td>✓</td>
<td>½</td>
<td>2X</td>
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3. Build Local Capacities to Manage for Impact

- Develop data management systems, skills, and digital tools
  - Shown to speed up disbursements, increase compliance with plans, and increase development impact.
  - It builds longer-term institutional capacity
- Train government staff to use administrative data to improve day-to-day management of government functions
  - Shown to improve workflows, address inefficiencies and reduce delays in government functions
- Develop integrated data systems for economic management
  - Shown to improve real-time information for policy response, especially during crises
Craft knowledge carefully

DIME Analytics Approach to Development Knowledge
Take advantage of the scope and scale of DIME research to develop and test technical solutions

Improve the credibility, transparency and reproducibility of World Bank research

Create public goods in the form of open-source tools and open-access resources and trainings
LIFECYCLE APPROACH TO CREDIBLE RESEARCH

**Building the team**
- Recruitment, onboarding and training of junior staff
- Continuing Education

**Enabling research**
- **Tools** for transparent research
- Technical support on data acquisition
- Bootcamps for real-time adoption of new tools and practices

**Analyzing data**
- Stata tools (**ietoolkit**, **iefieldkit**)
- Visualization libraries (**R**, **Stata**)
- Courses (**R**, **Python**)
- Peer Code Review

**Publication**
- Computational reproducibility
- Replication packages
- Advanced code review

Cross-cutting Resources
- [Development Research in Practice: the DIME Analytics Data Handbook](#)
- [DIME Wiki](#)
- [Office Hours](#)
- [Measuring Development Conference](#)
People who use evidence to make decisions should be able to scrutinize and recreate results easily. THIS REQUIRES:

- Publicly accessible data
- Publicly accessible (and clearly written) analytical code
- Validation that all results can be reproduced
Establishing a norm of reproducible research

Before a working paper is published, verify computational reproducibility:

• Does the code run on a different computer using only the files provided?
• Does the code produce stable outputs over multiple runs?
• Do the outputs exactly match the results in the paper?
• Is the reproducibility package complete and ready to publish?

REPLICATION RARELY POSSIBLE
An analysis of 203 economics papers found that fewer than one in seven supplied the materials needed for replication.

ELEMENTS PROVIDED*:
- None
- One or more missing
- All, code doesn’t run
- All, code runs

203 PAPERS PUBLISHED

59%
24%
14%
3%

*The elements assessed were raw data, raw code, estimation data and estimation code.
Open Science Increases Research Credibility

Kondylis et al, *Demand for 'Safe Spaces': Avoiding Harassment and Stigma*

<table>
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<td><a href="https://openknowledge.worldbank.org/handle/10986/33853">https://openknowledge.worldbank.org/handle/10986/33853</a></td>
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Public Goods Attract Substantial Global Interest

**DIME Wiki**
597 Registered Contributors
724,027 Total Users and 1,322,684 Views

**Global Usage**

**Top 10 countries by number of viewers:**
US, India, UK, Germany, Ghana, Nigeria, Spain, Philippines, Netherlands, Ethiopia

**Most Active Cities (outside D.C.)**

- Nairobi
- London
- Lagos
- New York
- Kampala
- Addis Ababa
- Abuja
- Chicago
- Dubai
- Delhi

Viewership has expanded to cities like Dar es Salaam, Dhaka, Lusaka, Kigali, Cotonou, Sydney, Jakarta, and Guwahati
Development Research in Practice: The DIME Analytics Data Handbook

- Trains users of development data how to handle data effectively, efficiently, and ethically
- Compiles DIME best practices into a single narrative covering the full research production cycle
- Case study of a real DIME impact evaluation provides concrete examples throughout
- Available for free on the World Bank Open Knowledge Repository or purchase on Amazon
Stata tools to improve efficiency & reproducibility

Automation of common tasks saves time and reduces errors

**ietoolkit**

Suite of commands to automate routine impact evaluation analysis tasks ([repository](#))

Launched 2017 ([blog](#))

**iefieldkit**

Suite of commands to automate routine data collection and processing tasks ([repository](#))

Launched 2020 ([blog](#)), published in *Stata Journal*

**style guide**

First “style guide” for common tasks in Stata. Makes code easier to read and review across projects

Published as part of *Development Research in Practice* ([online](#))

**linter**

Stata command to flag and correct problematic coding practices in do-files

Released 2023 ([blog](#))
**Flagship Courses Institutionalize Credible Research**

- Plan for and supervise high-quality field research
- Develop and implement a data quality assurance strategy
- Ensure fidelity to research design
- Integrate monitoring and evaluation systems with research data
- Design and program electronic survey instruments
- Manage complex datasets and produce descriptive analysis for policymakers

- Why reproducibility matters for economics research
- How to use GitHub for transparent and effective collaboration
- Programming 101
- How to manage, clean and tidy raw datasets
- Best practices for data analysis
- Principles for working with personal data
- How to create reproducible research outputs

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**Manage Successful Field Research**

**Reproducible Research Fundamentals**
Measuring development 2023

Measuring the risks and impacts of climate change

Thank you!