

Why we need Open Policy Analysis

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November 9, 2018

Policy Analysis And The Evidence-Based Policy Movement

Evidence-Based movement is growing.

- “The golden age of evidence-based policy” (Haskins 2017).
- Credible causal evidence (Angrist & Pischke, 2010)
- Transparency and reproducibility of research (Miguel et al. 2014).

Policy Analysis is a fundamental link.

- As many definitions as textbooks (Dunn, 2015; Weimer & Vining, 2017; Williams, 1971)
- Common denominator: client-oriented empirical analysis meant to inform a specific policy debate
- Aspires at scientific rigor. (Wildavsky 1979),

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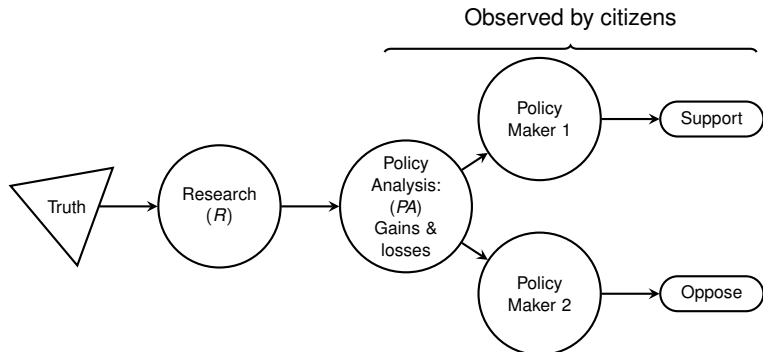
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One Ideal Evidence-Based Policy Link



Reproducibility Crisis In Empirical Research

- Large magnitude of publication bias (Franco et al 2014).
- Evidence of extensive p-hacking across social science disciplines (Gerber et al 2008, Brodeur et al 2016).
- Replication rates are low (Collaboration et al, 2015 , Camerer et al, 2016, 2018).
- Computational reproducibility is also low (Stodden et al 2016, Chang and Li 2015, Gertler et al 2018).

The Open Science Movement

- Definition of principles of Open Science/Research Transparency (Miguel et al 2014)
- Development of guidelines to operationalize principles of Open Science (Nosek et al 2015)
- Journals and funders: Journals (Science + 5k other journals), Registries (AEA), Funders (NIH, NSF and multiple donors)

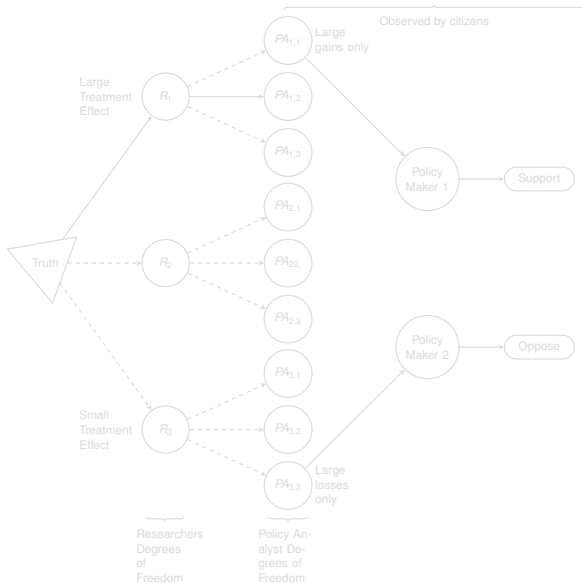
Credibility Crisis Of Policy Analysis

- Incredible Certitudes (Manski, 2013)
- Report wars (Wesselink et al, 2013)
- Alternative facts (“The Death of Expertise” Nichols, 2017; “The Death of Truth”, Kakutani 2018; “Truth Decay”, Rich & Kavanagh 2018)

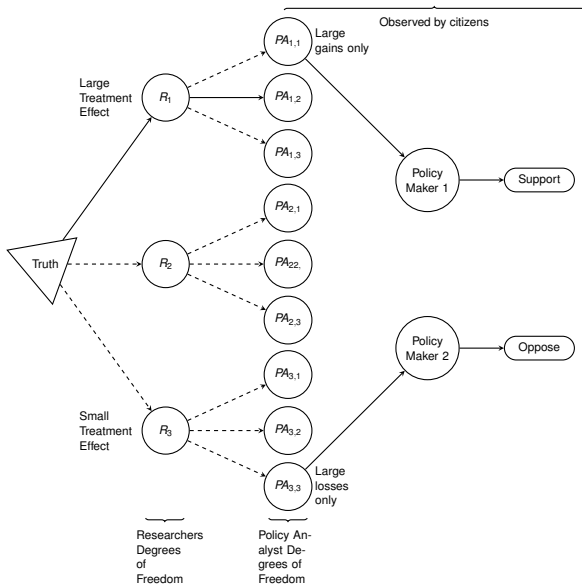
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How This Affects The Evidence Based Policy Link?



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Relevance

Main consequences of policy analysis that lacks openness:

- 1 Cherry picking evidence.
- 2 Challenging to automate and improve systematically recurring reports.
- 3 Difficulty understanding how research informs policy analysis.

Cherry Picking Evidence

“When I was director of the CBO, I was very frustrated when we would write a policy report [saying] a certain policy would have these two advantages and these two disadvantages, and the advocates would quote only the part about the advantages, and the opponents would quote only the part about the disadvantages. That encourages the view that there are simple answers. There aren’t generally simple answers. There are trade-offs.”

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Harvard Magazine, 2016

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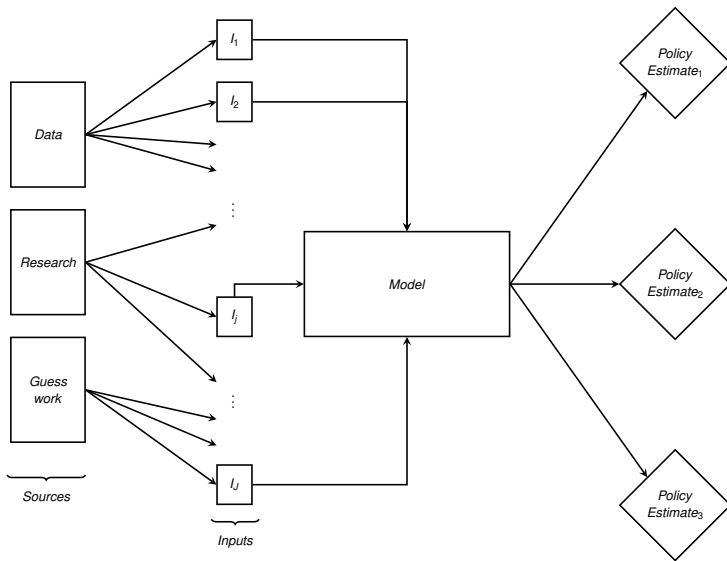
Open Science

	Empirical Research	Policy Analysis
Problems	Reproducibility Crisis	Credibility Crisis
Solutions	<i>Open Science</i> Principles, Guidelines, Applications	

Open Policy Analysis

	Empirical Research	Policy Analysis
Problems	Reproducibility Crisis	Credibility Crisis
Solutions	<i>Open Science</i> Principles, Guidelines, Applications	<i>Open Policy Analysis</i> Principles

The Process of Policy Analysis



Principles for Open Policy Analysis

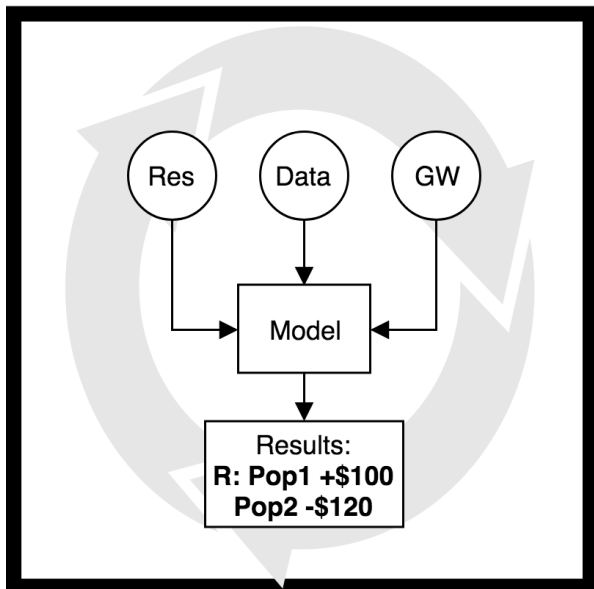
Proposed principles:

- 1 Computational Reproducibility
- 2 Analytic Transparency
- 3 Output Transparency

Principle 1: Stop re-inventing the wheel

Computational Reproducibility

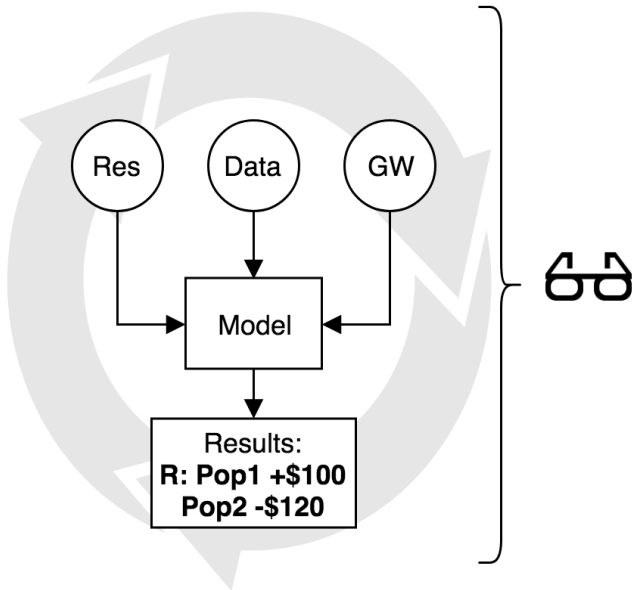
- Literate Programming
- Version control
- File structure
- **Label sources**



Principle 2: Show your work (readable)

Analytic Transparency

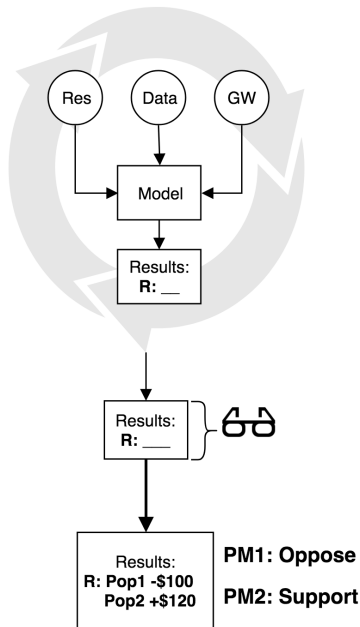
- Open code
- Open data
- Report as Dynamic Document



Principle 3: Let's all agree on one table/viz

Output Transparency

- Pre-committed output display
- Assumptions-output link



Suggestions

Suggestions:

- ➊ **Policy Analysts: Just Post It.**
Things are moving in this direction. Play a leading role in a credibility revolution for policy analysis.
- ➋ **Policy Analysis Organizations: Open by Default**
Boost in credibility, lower costs in the long run. Examples: GiveWell, and AEI.
- ➌ **Government Agencies and Funders: Support Open Policy Analysis** Examples: Require contracted policy analysis to be fully open. Support training and adoption of new tools (VC and DD). Inject resources for the transition.

Examples

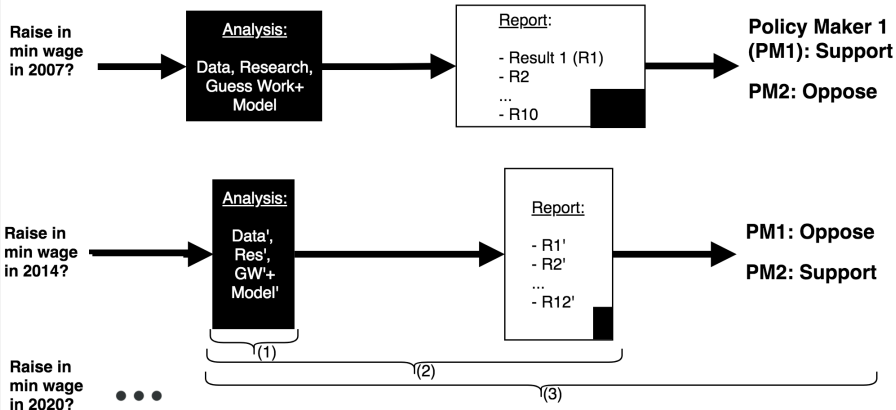
- [Open Source Policy Center \(AEI\)](#) : Open code, computationally reproducible, easy to test assumption-output link.
- [GiveWell](#): Open spreadsheets, anybody can check results.
- [CBO](#): first government agency to release (some) code and data for analysis.
- **BITSS/CEGA**: examples of OPAs:
 - ▶ [OPA version](#) of CBO's minimum wage analysis of 2014.
 - ▶ Work in progress: CBA of de-worming policies.
 - ▶ Other activities: developing guidelines for OPA, convenings.

Summing Up: Where We Are

Traditional Policy

Analysis

A



Summing Up: Where Should We Go

Open Policy Analysis

- Raise in min wage in 2007?
- 2014 (changes in + -)
- 2020, 2030, ...

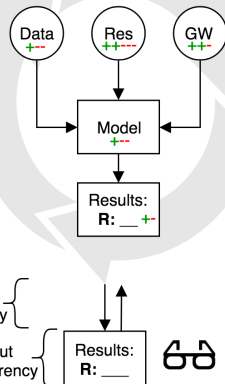
Results:
R: Pop1 -\$100
Pop2 +\$120

PM1: Oppose
PM2: Support

Computational
Reproducibility

Analytic
Transparency

Output
Transparency



B

What lies ahead

Let's assume this becomes the new status quo.

- Costs of producing the next report on effects of minimum wage will be very small.
- Every additional effort will imply improvements on the “state of the art” report (e. g. $dB L$; $\eta(MW)$, $\alpha_1(MW)$)
- Learning about one parameter (QALYs, DWL) will update estimates *across* reports.
- Much easier to have a substantive and normative policy debate.
Pilot example: [Shiny App!](#).

"Democracy Thrives In
Sunlight"

The Wonk Times

Washington DC

VOL.III. . . No.14

MARCH 29, 2020

THREE DOLLARS

CBO Publishes Open Report on Minimum Wage

*Results Will Be Published
Separately in Two Weeks*

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero. nonummy eget. con-

nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Bipartisan Support for CBO Methodology

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viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum.

Thank you.

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