

Why We Need Open Policy Analysis

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Congressional Budget Office, March 2018

Slides at

<http://www.github.com/fhoces/CBO2018>

- 1 Policy Analysis And The Evidence-Based Policy Movement
- 2 Reproducibility Crisis In Empirical Research
- 3 The Open Science Movement
- 4 Credibility Crisis Of Policy Analysis
- 5 Proposed Principles for Open Policy Analysis
- 6 Challenges And Suggestions
- 7 Conclusion And Next Steps

Open Policy Analysis

Crisis in Research

Open Science

Crisis in PA

Open PA

Conclusion

- Haskins, (2017).
- credible causal evidence (Angrist & Pischke, 2010)
- transparency and reproducibility of research (Miguel et al. 2014).
- Commission on Evidence-Based Policymaking (CEBP)

Evidence-Based Movement is Growing.

- Haskins, (2017).
- credible causal evidence (Angrist & Pischke, 2010)
- transparency and reproducibility of research (Miguel et al. 2014).
- Commission on Evidence-Based Policymaking (CEBP)

Policy Analysis is 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),

An Ideal Evidence-Based Policy Link

Open Policy
Analysis

Evidence
Based

Crisis in
Research

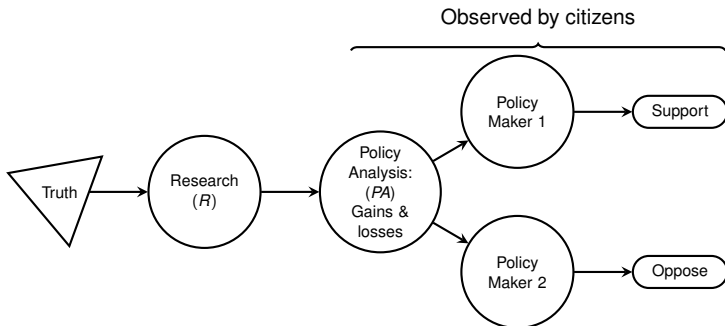
Open Science

Crisis in PA

Open PA

Challenges
And
Suggestions

Conclusion





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Conclusion

- Researchers believe in good science but don't practices it (Anderson, Martinson, & De Vries 2007).
- The file drawer problem is big (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 40-60%, Camerer et al, 2016 60%). Computational reproducibility is also low (Stodden et al 2016, Chang and Li 2015 45%, Gertler et al 2018 14%).

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Conclusion

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The Open Science Movement

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- 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 are responding to this: Registries (AEA), Journals (Science + 5k), Funders (CITE FUNDERS)

Open Policy Analysis

Conclusion

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How This Affects The Evidence Based Policy Link?

Open Policy Analysis

Evidence Based

Crisis in Research

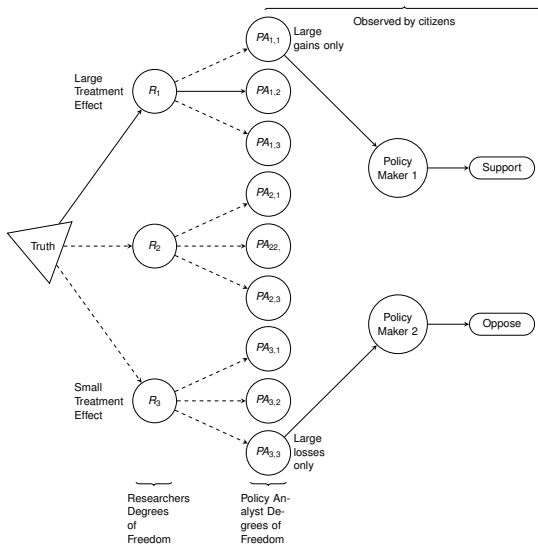
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Relevance 1: Cherry Picking Evidence

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“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.”

— Douglas Elmendorf (Director of CBO, 2009-2015)
Harvard Magazine, 2016

Relevance 2: Challenging to Automate and Improve Systematically Recurring Reports

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Evidence Based

Crisis in Research

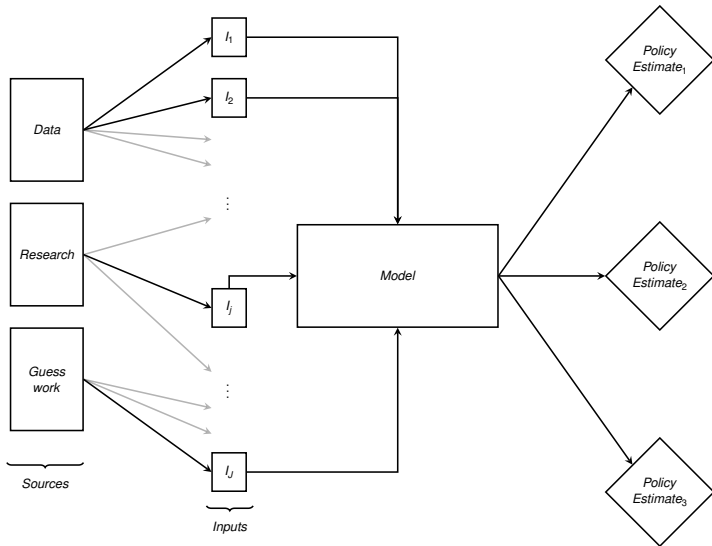
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Relevance 3: Difficulty Understanding how Research Informs Policy Analysis

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- What happens when new research emerges?
- Where are the largest unknowns in the policy analysis?
- Where is the marginal piece of research most informative for this analysis?

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Conclusion

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



Principles for Open Policy Analysis

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Proposed principles:

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

Principle 1

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Analysis

Evidence
Based

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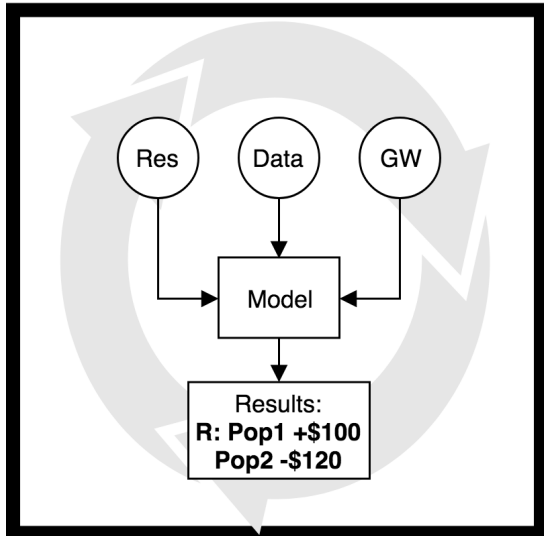
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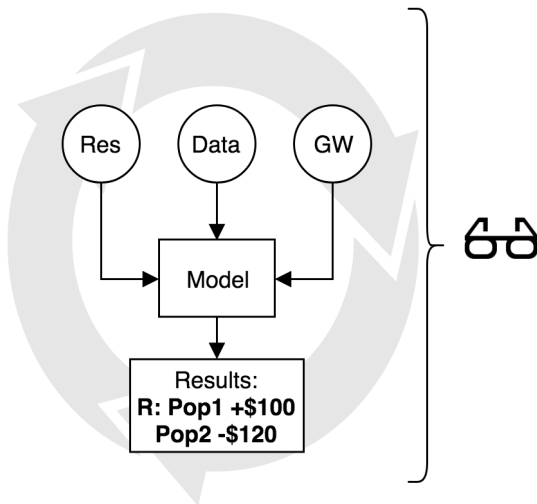
Computational Reproducibility

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



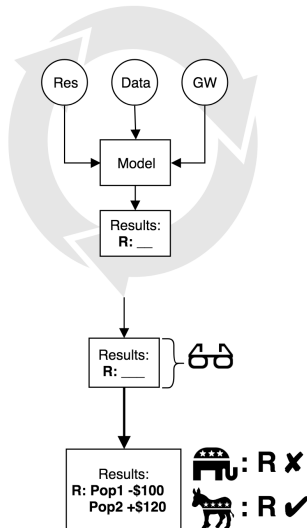
Analytic Transparency

- Open code
- Open data
- Report as
Dynamic
Document



Output Transparency

- Pre-committed output display
- Assumptions-output link





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Summing Up: Where We Are

Open Policy
Analysis

Evidence
Based

Crisis in
Research

Open Science

Crisis in PA

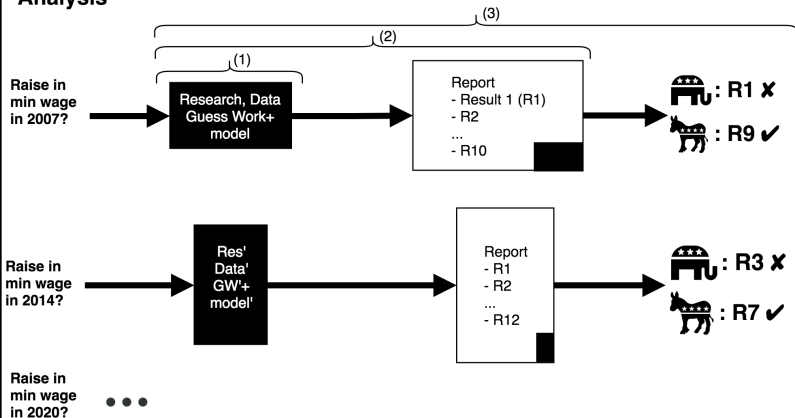
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Traditional Policy

Analysis



Summing Up: Where Should We Go

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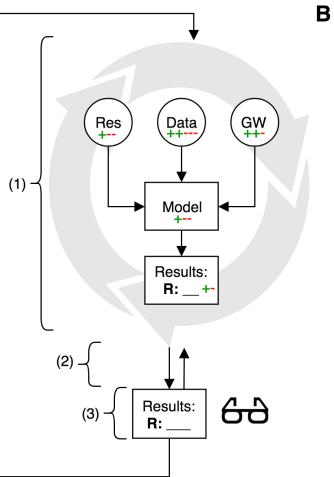
Challenges
And
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Open Policy Analysis

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

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





- Journal Science was key for research. Need high profile producer of policy analysis to buy in.
- Develop community endorsed guidelines for OPA (similar to TOP Guidelines for Open Science)
- Carry out case studies with policy agencies to fine tune guidelines, and build a collection of examples (Hoces de la Guardia 2017).



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IN THE SOCIAL SCIENCES

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Thank you.

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