

Open Policy Analysis

Evidenc Based

Research

Open Science

Crisis in PA

Open PA

Challenges And

Conclusion

Why We Need Open Policy Analysis

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Congressional Budget Office, March 2018
Slides at

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



Outline

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Challenges And Suggestions

- 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



Policy Analysis And The Evidence-Based Policy Movement

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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),



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An Ideal Evidence-Based Policy Link

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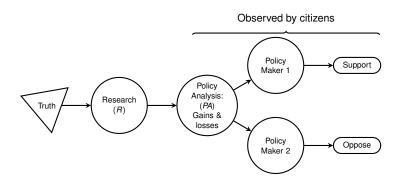
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Challenges And

- 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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The Open Science Movement

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Challenges And Suggestions

- 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)



Credibility Crisis Of Policy Analysis

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- Manski
- Report wars
- RDOF(Simmons, Nelson, and Simonsohn 2011, Wicherts et al., 2016).



How This Affects The Evidence Based Policy Link?

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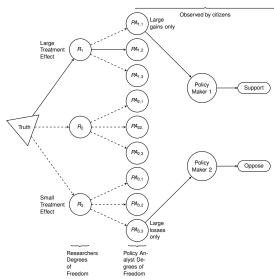
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Relevance 1: Cherry Picking Evidence

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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 are trade-offs."

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



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Relevance 2: Challenging to Automate and Improve Systematically Recurring Reports

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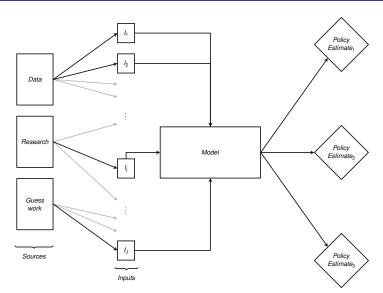
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Relevance 3: Difficulty Understanding how Research Informs Policy Analysis

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



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And Suggestions

	Empirical	Policy
	Research	Analysis
Problems	Reproducibility	Credibility
	Crisis	Crisis
Solutions	Open Science	
	Principles, Guidelines,	
	Applications	



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	Empirical	Policy
	Research	Analysis
Problems	Reproducibility	Credibility
	Crisis	Crisis
Solutions	Open Science	Open Policy Analysis
	Principles, Guidelines,	Principles
	Applications	



Principles for Open Policy Analysis

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Proposed principles:

- Computational Reproducibility
- 2 Analytic Transparency
- 3 Output Transparency



Principle 1

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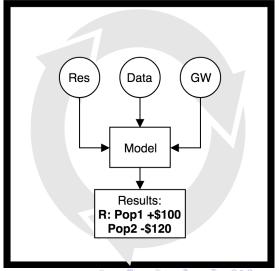
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Computational Reproducibility

- LiterateProgramming
- Version control
- File structure
- Label sources





Principle 2

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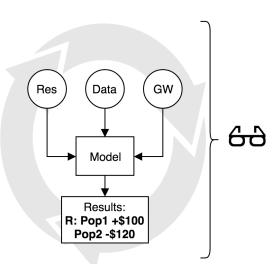
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Analytic Transparency

- Open code
- Open data
- Report as Dynamic Document





Principle 3

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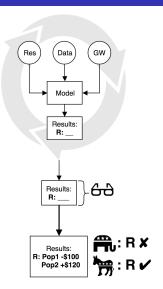
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Output Transparency

- Precommitted output display
- Assumptionsoutput link





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Challenges:

- Policymakers may not want analyses to be open.
- Analysts may wish to keep policy analyses "closed".
- For policy analysis contracted out to third parties: Opening methods will prevent them form reselling extensions.
- Initially reproducibility represents an additional layer of work.
- Limits to sharing sensitivity of information, requires resources for adequate de-identification if open data is expected



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Suggestions:

- Policy Analysts: Just Post It. Things are moving in this direction. Play a leading role in a credibility revolution for policy analysis. Examples: from science.
- Policy Analysis Organizations: Open by Default Boost in credibility, lower costs in the long run. First mover advantage. Examples: GiveWell, and AEI.
- 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: from science.



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Summing Up: Where We Are

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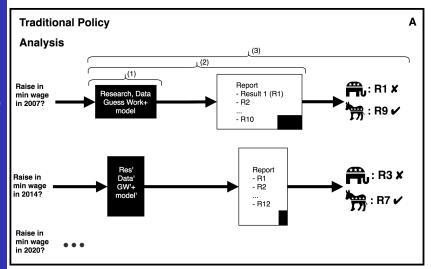
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Summing Up: Where Should We Go

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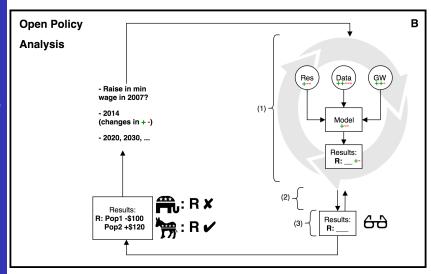
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Conclusion

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Challenges And

- Draw a parallel between reproducibility crisis in empirical research and a credibility crisis in policy analysis.
- Proposed guiding principles for open policy analysis.
- Identify challenges and provide recommendations for different stakeholders.



Next Steps

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And Suggestions

- 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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Thank you.

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